No. 14-378

Title:	Stephen Dominick McFadden, Petitioner
	v.
	United States
Docketed:	October 3, 2014
Linked with 14A199	
Lower Ct:	United States Court of Appeals for the Fourth Circuit
Case Nos.:	(13-4349)
Decision Date:	May 21, 2014
Rehearing Denied:	June 17, 2014

Questions Presented

~~Date~~	~~~~~~~~Proceedings and Orders~~~~~~~~~~~~~~~~~~~~
Aug 18 2014	Application (14A199) to extend the time to file a petition for a writ of certiorari from September 15, 2014 to October 14, 2014, submitted to The Chief Justice.
Aug 21 2014	Application (14A199) granted by The Chief Justice extending the time to file until October 14, 2014.
Oct 2 2014	Petition for a writ of certiorari filed. (Response due November 3, 2014)
Oct 30 2014	Order extending time to file response to petition to and including December 3, 2014.
Nov 20 2014	Order further extending time to file response to petition to and including December 15, 2014.
Dec 15 2014	Brief of respondent United States in opposition filed. (To be reprinted).
Dec 17 2014	DISTRIBUTED for Conference of January 9, 2015.
Dec 19 2014	Reply of petitioner Stephen Dominick McFadden filed. (Distributed)
Jan 12 2015	DISTRIBUTED for Conference of January 16, 2015.
Jan 16 2015	Petition GRANTED.
Mar 2 2015	Joint appendix filed. (Statement of costs filed.)
Mar 2 2015	Brief of petitioner Stephen Dominick McFadden filed.
Mar 5 2015	Consent to the filing of amicus curiae briefs, in support of either party or of neither party, received from counsel for the petitioner.
Mar 6 2015	SET FOR ARGUMENT ON Monday, April 21, 2015
Mar 9 2015	Brief amicus curiae of National Association of Criminal Defense Lawyers filed.
Mar 9 2015	Brief amici curiae of Expert Forensic Scientists filed.
Mar 16 2015	CIRCULATED.
Mar 17 2015	Record requested from U.S.C.A. 4th Circuit.
Mar 17 2015	Record received from U.S.C.A. 4th Circuit is electronic and located on PACER. Also sent electronically from the 4th Circuit a SEALED Appendix.
Apr 1 2015	Brief of respondent the United States filed. (Distributed)
Apr 10 2015	Reply of petitioner Stephen Dominick McFadden filed. (Distributed)
Apr 21 2015	Argued. For petitioner: Kevin K. Russell, Bethesda, Md. For respondent: Sarah E.

	Harrington, Assistant to the Solicitor General, Department of Justice, Washington, D. C.
Jun 18 2015	Judgment VACATED and case REMANDED. Thomas, J., delivered the opinion of the Court, in which Scalia, Kennedy, Ginsburg, Breyer, Alito, Sotomayor, and Kagan, JJ., joined. Roberts, C. J., filed an opinion concurring in part and concurring in the judgment.
Jul 20 2015	JUDGMENT ISSUED.

14-378

No. 14-___

IN THE

Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN,

Petitioner,

v.

UNITED STATES OF AMERICA,

Respondent.

On Petition for a Writ of Certiorari
to the United States Court of Appeals
for the Fourth Circuit

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

Federal law criminalizes "knowingly or intentionally" manufacturing, distributing, or dispensing "a controlled substance." 21 U.S.C. § 841(a). Prohibited "controlled substance[s]" ordinarily are listed in schedules updated through notice-and-comment rulemaking. *See id.* §§ 802(6), 811-12. However, the Controlled Substance Analogue Enforcement Act of 1986 provides that a "controlled substance analogue" also shall be treated as a Schedule I controlled substance. 21 U.S.C. § 813. A "controlled substance analogue" is defined as a substance with a chemical structure that is "substantially similar" to a schedule I or II drug and has a "substantially similar" effect on the user (or is believed or represented by the defendant to have such a similar effect). *Id.* § 802(32)(A). The Government does not publish lists of controlled substance analogues; instead, it prosecutes individuals who sell what prosecutors believe to be substances meeting the statutory definition, leaving lay juries to decide whether any given alleged analogue is substantially similar in chemical structure and effect to a scheduled controlled substance, often on the basis of conflicting expert testimony.

The Question Presented is:

Whether, to convict a defendant of distribution of a controlled substance analogue, the government must prove that the defendant knew that the substance constituted a controlled substance analogue, as held by the Second, Seventh, and Eighth Circuits, but rejected by the Fourth and Fifth Circuits.

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PETITION FOR A WRIT OF CERTIORARI

Petitioner Stephen Dominick McFadden respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Fourth Circuit.

OPINIONS BELOW

The opinion of the United States Court of Appeals for the Fourth Circuit (Pet. App. 1a-27a) is published at 753 F.3d 432. The district court's opinion (Pet. App. 44a-68a) is unpublished, but available at 2013 WL 8339005.

JURISDICTION

The judgment of the court of appeals was entered on May 21, 2014. Pet. App. 1a. The court of appeals denied petitioner's timely petition for rehearing en banc on June 17, 2014. Pet. App. 69a. On August 21, 2014, the Chief Justice extended the time to file this petition through October 14, 2014. No. 14A199. This Court has jurisdiction pursuant to 28 U.S.C. § 1254(1).

RELEVANT STATUTORY PROVISIONS

Section 841(a) of Title 21 provides in relevant part:

(a) Unlawful acts

Except as authorized by this subchapter, it shall be unlawful for any person knowingly or intentionally –

(1) to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense, a controlled substance

Section 813 of Title 21 provides:

A controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I.

Section 802(32) of Title 21 provides:

(A) Except as provided in subparagraph (C), the term "controlled substance analogue" means a substance--

(i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;

(ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or

(iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

(B) The designation of gamma butyrolactone or any other chemical as a listed chemical pursuant to paragraph (34) or (35) does not preclude a finding pursuant to subparagraph (A) of this paragraph that the chemical is a controlled substance analogue.

(C) Such term does not include--

(i) a controlled substance;

(ii) any substance for which there is an approved new drug application;

(iii) with respect to a particular person any substance, if an exemption is in effect for investigational use, for that person, under section 355 of this title to the extent conduct with respect to such substance is pursuant to such exemption; or

(iv) any substance to the extent not intended for human consumption before such an exemption takes effect with respect to that substance.

STATEMENT OF THE CASE

This case presents the Court an opportunity to resolve an acknowledged and long-standing 3-2 circuit conflict over the scienter requirement for criminal violation of the Controlled Substance Analogue Enforcement Act of 1986 (Analogue Act), Pub. L. No. 99-570, tit. I, § 1202, 100 Stat. 3207-13.

I. Legal Background

Federal law criminalizes "knowingly or intentionally" manufacturing, distributing, or dispensing "a controlled substance." 21 U.S.C. § 841(a). The statute defines a "controlled substance" as a substance listed on a schedule described in the statute, as those schedules may be amended by the Attorney General through notice-and-comment rulemaking. *See* 21 U.S.C. §§ 802(6), 811-12. Accordingly, anyone wishing to know whether a particular substance is a prohibited controlled substance may consult the Code of Federal Regulations or the Department of Justice's website. *See* 21 C.F.R. §§ 1308.11-1308.15; Office of Diversion Control, Drug Enforcement Admin. (DEA), *Lists of: Scheduling Actions[,] Controlled Substances[,] Regulated Chemicals* (2014), *available at* http://www.deadiversion.usdoj.gov/schedules/orangebook/orangebook.pdf.

In 1984, Congress gave the Attorney General emergency authority to add new substances to schedule I on an expedited basis whenever he finds that doing so "is necessary to avoid an imminent hazard to the public safety." 21 U.S.C. § 811(h)(1).

Two years later, Congress supplemented that power through the Analogue Act. The new statute

provided that a "controlled substance analogue shall, to the extent intended for human consumption, be treated for the purposes of any Federal law as a controlled substance in schedule I." 21 U.S.C. § 813. Consequently, distribution of a controlled substance analogue is punishable by up to twenty years' imprisonment (or, if death or substantial bodily injury results, a mandatory minimum sentence of twenty years and up to life imprisonment). *Id.* § 841(b)(1)(C).

As relevant here, a "controlled substance analogue" is defined as a substance:

> (i) the chemical structure of which is *substantially similar* to the chemical structure of a controlled substance in schedule I or II;
>
> (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is *substantially similar* to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or
>
> (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is *substantially similar* to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. § 802(32)(A) (emphasis added).[1]

Unlike controlled substances, the Attorney General is not required to define and publicize in advance what constitutes a controlled substance analogue. As a consequence, a "substance's legal status as a controlled substance analogue is not a fact that a defendant can know conclusively *ex ante*; it is a fact that the jury must find at trial." *United States v. Turcotte*, 405 F.3d 515, 526 (7th Cir. 2005). Generally, to decide whether a substance is "substantially similar" to a scheduled controlled substance, juries must resolve the conflicting claims of expert witnesses on complex matters of scientific methodology, chemistry, and biology. *See, e.g.*, *United States v. Brown*, 415 F.3d 1257, 1261-63 (11th Cir. 2005) (describing relevant testimony in one trial); *United States v. Forbes*, 806 F. Supp. 232, 237 (D. Colo. 1992) (noting defendant was prosecuted despite fact that the "government's own chemists cannot agree" on whether the substance at issue met the "substantial similarity" test, perhaps in part because the "scientific community cannot even agree on a methodology to use to determine structure similarity").

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[1] The definition also sets out certain exclusions that are not relevant to this case. *See id.* §§ 802(32)(B)-(C). Although the statute is confusingly worded, the "vast majority of federal courts" construe it to require the government to satisfy subsection (i) *and* either subsection (ii) or (iii). Pet. App. 47a n.2 (quoting *United States v. Turcotte*, 405 U.S. 515, 522 (7th Cir. 2005) (collecting cites)).

II. Factual And Procedural Background

1. In 2007, petitioner, a construction worker, began operating a small business buying overstocked items and reselling them on the internet. *See* C.A. J.A. 634, 814, 842. In early 2011, he noticed that a variety of businesses in his Staten Island neighborhood were openly selling products referred to as "bath salts" that petitioner believed to be aroma therapy products that, when burned, produced a stimulating vapor. *See id.* 633, 634-37, 842-44.

Prior to selling bath salts himself, on the advice of his brother, a federal Immigration and Customs Enforcement officer, petitioner researched the legality of the substances by examining the online list of controlled substances on the DEA's website. *See* C.A. J.A. 633, 635, 638-39, 844-46. Finding nothing to indicate that the substance he intended to sell were illegal, petitioner began selling bath salts containing various ingredients. *See id.* 634-39, 846-47. When the Government subsequently listed two of the compounds in some of his products on the controlled substances schedule, petitioner flushed his supply of the affected products down the toilet. *See id.* 640-41.[2] And when an undercover DEA agent subsequently attempted to purchase the illegal

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[2] In October 2011, the DEA used its emergency scheduling authority to classify several chemical compounds found in some bath salts as schedule I controlled substances. *See* Pet. App. 6a n.2, 45a n.1; *see also* Michael McLaughlin, *Bath Salts Incidents Down Since DEA Banned Synthetic Drug*, Huffington Post (Sep. 4, 2012), http://www.huffingtonpost.com/2012/09/04/bath-salts-ban_n_1843420.html.

substances from him, petitioner refused on the ground that the compounds were illegal. *See id.* 847-50.

2. Nevertheless, in November, 2012, a grand jury indicted petitioner for distributing, and conspiring to distribute, products containing 4–methylethyl-cathinone, 3, 4–methylenedioxypyrovalerone, and/or 3, 4–methylenedioxymethcathinone. Pet. App 5a. During the relevant time periods, none of these substances was listed as a controlled substance. *Id.* 6a n.2, 45a & n.1. The Government nonetheless insisted that these compounds were substantially similar to controlled substances, and therefore that petitioner had committed a criminal violation of the Analogue Act.

The ensuing "four-day jury trial focused primarily on the issue [of] whether" the chemicals at issue "constitute[d] controlled substances analogues." Pet. App. 7a. The jury heard from competing expert witnesses, including a chemist, a drug science specialist, and a pharmacist. *Id.* 7a-8a. The experts based their conflicting conclusions in significant part on their review of the scientific literature, animal studies, and their own analyses of the chemical structure of the substances. *Id.* 11a-12a, 24a, 64a-65a. The parties' experts disagreed about how to compare chemicals for "substantial similarity," whether the chemicals were in fact "substantially similar," and even on whether scientists can offer an opinion on "substantial similarity," when that phrase is not a scientific term. *See, e.g.*, Pet. App. 7a-8a, 24a, 64a-66a; C.A. J.A. 523-25, 551-53, 557, 574-78.

At the close of evidence, the district court rejected petitioner's request that the jury be

instructed that the Government was "required to prove that he knew, had a strong suspicion, or deliberately avoided knowledge that the [substances at issue] possessed the characteristics of controlled substance analogues." Pet. App. 21a. Instead, over petitioner's objection, the court gave a jury instruction under which the only state of mind requirement relating to the nature of the substance was that petitioner "intended for the mixture or substance to be consumed by humans." *Id.* 56a.[3]

After the jury convicted petitioner on all counts, the district court denied petitioner's motion for judgment of acquittal. Pet. App. 44a-68a. As relevant here, the court rejected petitioner's claim that the Analogue Act was unconstitutionally vague

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[3] Specifically, the court instructed the jury that it must find:

> FIRST: That the defendant knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act;
>
> SECOND: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act; and
>
> THIRD: That the defendant intended for the mixture or substance to be consumed by humans.

Pet. App. 56a.

as applied to him. *Id.* 46a-54a. It further rejected petitioner's argument that the court had improperly instructed the jury on the elements of a controlled substance analogue offense. *Id.* 54a-61a. The court acknowledged that the instructions did not require the Government to prove that petitioner "knew that the alleged analogues have a chemical structure that is substantially similar to the chemical structure of a controlled substance and, thus, that they were, in fact, controlled substance analogues under the Act." *Id.* 57a-58a. But it concluded that it was bound by the Fourth Circuit's decision in *United States v. Klecker*, 348 F.3d 69 (4th Cir. 2003), which it read to require proof only that the substance in question was intended for human consumption. Pet. App. 57a.

The district court recognized that this interpretation of the statute, while consistent with the law of the Fourth and Fifth Circuits, conflicted with precedent from the Seventh Circuit. *See id.* 58a.

2. The Fourth Circuit affirmed. Pet. App. 2a. The court agreed with the district court that under its prior decision in *Klecker*, the only "scienter requirement" for an Analogue Act conviction is "that the defendant intended that the substance at issue be consumed by humans." *Id.* 22a. As a consequence, the court reaffirmed, "the Act may be applied to a defendant who lacks actual notice that the substance at issue could be a controlled substance analogue." *Id.*

The court acknowledged that in "contrast to our decision in *Klecker*, the Seventh Circuit has imposed a strict knowledge requirement before a defendant may be convicted of violating the Act," demanding proof that "the defendant knew the substance in

question was a controlled substance analogue." Pet. App. 22a (quoting *Turcotte*, 405 F.3d at 527). But "[b]ecause we have not imposed such a knowledge requirement," the Fourth Circuit held, "the district court properly denied McFadden's requested jury instruction." *Id.*[4]

3. The Fourth Circuit subsequently denied a timely petition for rehearing. Pet. App. 69a.

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[4] The court also rejected petitioner's other claims on appeal, including his argument that the statute was unconstitutionally vague as applied to him in this case. Pet. App. 9a-16a.

REASONS FOR GRANTING THE WRIT

As the district court and court of appeals both acknowledged, the mental state required to commit a violation of the Controlled Substance Analogue Enforcement Act is the subject of a long-standing circuit conflict. In fact, division is deeper than the courts below acknowledged: three circuits hold that the defendant must know that the substance he distributed was a controlled substance analogue, while two others have directly rejected that rule. The circuit conflict compounds the risk of arbitrary treatment already endemic in the statute, under which the lawfulness of distributing any given alleged analogue is decided on a case-by-case basis by lay jurors under a vague "substantial similarity" standard, relying on competing expert testimony regarding complex scientific questions. This case presents the Court an ideal opportunity to resolve that uncertainty and diminish the risk of arbitrary treatment by correcting the Fourth Circuit's unduly narrow construction of the statute's scienter element.

I. The Circuits Are Divided 3-2 Over The Mental State Required For A Criminal Violation Of The Controlled Substance Analogue Act.

The Analogue Act does not itself directly criminalize sale of analogues. Instead, it directs that a "controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I." 21 U.S.C. § 813. Accordingly, the elements of criminal distribution of an analogue arise from two sources: (1) the Analogue Act itself (which

defines "controlled substance analogue" and provides, as just quoted, that the analogue must be "intended for human consumption"); and (2) the general criminal distribution provision of the Controlled Substances Act, 18 U.S.C. § 841(a).

Section 841(a), in turn, provides that "it shall be unlawful for any person *knowingly* or *intentionally*" to distribute "a controlled substance." *Id.* (emphasis added). To knowingly or intentionally distribute a controlled substance like cocaine, the lower courts have held, the defendant "must know that the substance in question is a controlled substance," that is, that the substance "was some kind of prohibited drug." *United States v. Turcotte*, 405 F.3d 515, 525 (7th Cir. 2005).[5] Under this standard, it is not necessary that the defendant "know the *type* of controlled substance he possesses." *Id.* (emphasis added) (quoting *United States v. Barlow*, 310 F.3d 1007, 1012 (7th Cir. 2002)). But he must know that the substance he possesses is *a* controlled substance. *Id.*

The courts are divided, however, over whether and how to apply this standard to controlled substance analogues. The circuits fall into two basic camps.

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[5] *See also, e.g.*, *United States v. Serrano-Lopez*, 366 F.3d 628, 634 (8th Cir. 2004); *United States v. Gamez-Gonzalez*, 319 F.3d 695, 700 (5th Cir. 2003); *United States v. Kairouz*, 751 F.2d 467, 468-69 (1st Cir. 1985); *United States v. Morales*, 577 F.2d 769, 775-76 (2d Cir. 1978); *United States v. Jewell*, 532 F.2d 697, 698 (9th Cir. 1976).

The Majority Rule. The Second, Seventh, and Eighth Circuits hold that the defendant must know that the substance in question is a controlled substance analogue (and thus, by definition, a controlled substance). *See United States v. Roberts*, 363 F.3d 118, 123 n.1 (2d Cir. 2004) (prosecution in analogue case must prove defendants acted "with the knowledge that they were in possession of a controlled substance"); *United States v. Turcotte*, 405 F.3d 515 (7th Cir. 2005) (the "defendant must know that the substance at issue meets the definition of a controlled substance analogue set forth in § 802(32)(A)"); *United States v. Sullivan*, 714 F.3d 1104, 1107 (8th Cir. 2013) (the jury must find that the defendant "knew he was in possession of a controlled substance analogue").[6]

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[6] In one passage of its decision in *Turcotte*, the Seventh Circuit seemingly suggested that its standard is different from the one applied by the Second Circuit in *Roberts*. *See* 405 F.3d at 526-27. But that disagreement appears to be based on an unduly strict interpretation of the Second Circuit's opinion. That is, the Seventh Circuit noted that *Roberts* requires proof that the defendants knew "they were in possession of a *controlled substance*." *Id.* at 526 (emphasis added) (quoting *Roberts*, 363 F.3d at 123 n.1). The Seventh Circuit remarked that read literally, this standard "is nonsensical since controlled substance analogs are, by definition, not 'controlled substances'" but rather are sufficiently similar to controlled substances to meet the definition of a "controlled substance analogue." *Turcotte*, 405 F.3d at 526. But precisely because that reading would make no sense, the Second and Eighth Circuit's decisions are better read to apply the same standard as the Seventh, requiring that the defendant know that he is possessing a controlled substance *in the sense that* he knows he is possessing a substance that has the features required to make it a

These courts have explained that their reading is consistent with the general scienter requirement of the Controlled Substances Act and also serves to mitigate the vagueness concerns that would otherwise arise under the statute. *See Turcotte*, 405 F.3d at 527; *Roberts*, 363 F.3d at 123 & n.1.

The Minority Rule. The Fourth and Fifth Circuits have rejected the majority rule.

In this case, for example, the Fourth Circuit directly rejected petitioner's assertion "that the district court erred in refusing to instruct the jury that the government was required to prove that he knew, had a strong suspicion, or deliberately avoided knowledge that the alleged CSAs possessed the characteristics of controlled substance analogues." Pet. App. 21a. Instead, the Fourth Circuit emphasized that the statute's *only* scienter element going to the nature of the substances was the requirement that the defendant intend the substance to be consumed by humans. *Id.*; *see also id.* 4a. Accordingly, as one district court in the Fourth Circuit has put it, citing the decision in this case, in "an Analogue Act prosecution, a defendant's knowledge that a substance possesses the characteristics of a controlled substance analogue is

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controlled substance analogue, which the statute then treats as a controlled substance. *See, e.g.*, *United States v. Franklin*, No. 12-03085-01/10-CR-S-MDH, 2014 WL 1953077, at * 7 (W.D. Mo. May 15, 2014) (explaining that the "Eighth Circuit has adopted the Seventh Circuit's requirement, first explained in *United States v. Turcotte*, that the defendant must have known that the substance(s) at issue was a controlled substance analogue").

not a prerequisite for conviction." *United States v. Dau*, No. 7:13-cr-00082, 2014 WL 4187327, at *4 (W.D. Va. Aug. 22, 2014).

The Fifth Circuit has likewise rejected the claim that the Government must prove the defendant's knowledge that the substance he distributed was a controlled substances analogue. In *United States v. Desurra*, 865 F.2d 651 (5th Cir. 1989), the defendant argued that the Government was required to prove that he "understood MDMA [the alleged analogue] to be a chemical analogue of MDA [a scheduled controlled substance]." *Id.* at 653. The Fifth Circuit concluded that this "argument misunderstands the intent requisite to convictions under" the Analogue Act. *Id.* "If a defendant possesses an analogue, with intent to distribute or import, the defendant need not know that the drug he possesses is an analogue." *Id.* Instead, it "suffices that he know what drug he possesses and that he possess it with the statutorily defined bad purpose," *i.e.*, with intent to distribute or import it. *Id.*;[7] *see also United States v. Petree*, No. 13-50946, 2014 WL 4413263, at *1 (5th Cir. Sep. 9, 2014) (rejecting claim that district court committed reversible plain error by failing to find that the defendant "knew the substances were controlled substance analogues" because under *Desurra* if "a defendant possesses an analogue, with intent to distribute . defendant need not know that the drug

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[7] The court acknowledged elsewhere in its opinion that the defendant must also intend that the substance be used for human consumption, consistent with the Fourth Circuit's rule. *See id.* at 654.

is an analogue") (alteration in original) (quoting *Desurra*, 865 F.2d at 653 (alteration in original)).

II. The Circuit Conflict Warrants This Court's Review.

The circuit conflict is intolerable and should be resolved by this Court in this case.

The question that divides the circuits is recurring and important. The Government has acknowledged that it frequently prosecutes individuals under the Analogue Act rather than wait even the limited time required to invoke the emergency procedures Congress provided for expedited listings of new controlled substances.[8] As the broad circuit conflict illustrates, the proper construction of the Act's scienter element is a critical question in such prosecutions.

Moreover, the division among the circuits could hardly be more stark – three circuits hold that the Government must prove that the defendant knew he was possessing a substance that has the characteristics required by statute for classification as a controlled substance analogue, while two others

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[8] *See, e.g.*, *DEA News: Huge Synthetic Drug Takedown* (May 7, 2014), http://wew.justice.gov/dea/divisions/hq/2014/hq050714.shtml (noting that prosecutions under the Analogue Act "have grown steadily in recent years."); Lisa N. Sacco & Kristin Finklea, Cong. Research Serv., *Synthetic Drugs: Overview and Issues for Congress* 17 (Aug. 15, 2014), *available at* http://fas.org/sgp/crs/misc/R42066.pdf ("Over the last several years, the DEA has led major enforcement efforts against the synthetic drug industry," a number of which rely on the Analogue Act for prosecution).

hold that the Government need prove nothing about the defendant's knowledge of the nature of the substance he possesses, only that he intend for it to be consumed by humans.

There is no genuine prospect of the circuit conflict being resolved without this Court's intervention. The disagreement among the circuits is widely acknowledged. *See, e.g.*, Pet. App. 22a (court of appeals acknowledging conflict between Fourth and Seventh Circuits); *id.* 55aa (district court acknowledging conflict between Fourth, Fifth, and Seventh Circuits); *Turcotte*, 405 F.3d at 526 (describing various approaches among the courts); Gregory Kau, *Flashback to the Federal Analog Act of 1986: Mixing Rules and Standards in the Cauldron*, 156 U. PA. L. REV. 1077, 1106-07 (2008) (student comment) (discussing split); Hari K. Sathappan, *Slaying the Synthetic Hydra: Drafting A Controlled Substances Act That Effectively Captures Synthetic Drugs*, 11 OHIO ST. J. CRIM. L. 827, 840 & nn.90-92 (2014) (student note) (same).

There is no trajectory toward uniformity. Indeed, the Fourth Circuit adopted the minority position in this case even while acknowledging it was in conflict with the Seventh Circuit's *Turcotte* decision. *See* Pet. App. 22a. Petitioner asked for rehearing en banc, pointing to the circuit conflict, *see* Pet. for Reh'g En Banc § I, but the petition was denied, *see* Pet. App. 69a. At the same time, there is no reason to think that all three circuits on the other side of the conflict will grant rehearing en banc and reverse course, particularly given the Seventh Circuit's thoughtful consideration of the alternative

interpretations of the statute. *See Turcotte*, 405 F.3d at 526.

Finally, further percolation would serve no purpose. The conflict has existed for a decade and the arguments on both sides have been thoroughly explored. There is every reason to expect that the remaining circuits will simply pick sides without providing any additional insight.

III. The Fourth Circuit's Decision Is Wrong.

The decision below also warrants review because it is wrong, ignoring the plain language of the statute and long-standing legal tradition, while unnecessarily casting grave constitutional doubt on the Analogue Act.

1. The Fourth Circuit's narrow scienter requirement ignores that the intent element for an analogue substances conviction is set forth in two separate provisions of the Controlled Substances Act. The Fourth Circuit focused on Section 813, which provides that controlled substance analogues are to be treated as schedule I controlled substances to the extent "intended for human consumption." 21 U.S.C. § 813; *see* Pet. App. 3a-4a; *Klecker*, 348 F.3d at 71. But Section 813 does not itself make possession or distribution of controlled substance analogues a crime, even if intended for human consumption. It simply directs that an analogue be treated like any other controlled substance, the possession and sale of which is prohibited by Section 841(a). And Section 841(a) does not criminalize all sale or possession of controlled substances – it makes it a crime "*knowingly* or *intentionally* to manufacture, distribute, or dispense, or possess with intent to

manufacture, distribute, or dispense, a controlled substance." (emphasis added).

"As a matter of ordinary English grammar, it seems natural to read [a] statute's word 'knowingly' as applying to all the subsequently listed elements of the crime." *Flores-Figueroa v. United States*, 556 U.S. 646, 650 (2009). This is particularly true of a criminal statute. *Id.* at 652 ("[C]ourts ordinarily read a phrase in a criminal statute that introduces the elements of a crime with the word 'knowingly' as applying that word to each element."). Consequently, Section 841(a) is most reasonably read to require not only that the defendant know that he is distributing *something* (which he may or may not know is a controlled substance) but also that he know that the *something* has the characteristics that render it an illegal controlled substance.

That conclusion is buttressed by legal tradition. Congress enacted the Analogue Act against the backdrop of this Court's practice of construing "criminal statutes to include *broadly applicable* scienter requirements." *United States v. X-Citement Video, Inc.*, 513 U.S. 64, 70 (1994) (emphasis added). Absent significant reason to believe that Congress intended otherwise, "a conventional *mens rea* element require[s] that the defendant know the facts that make his conduct illegal." *Staples v. United States*, 511 U.S. 600, 605 (1994); *see also Dixon v. United States*, 548 U.S. 1, 5 (2006) ("[U]nless the text of the statute dictates a different result, the term 'knowingly' merely requires proof of knowledge of the facts that constitute the offense." (quoting *Bryan v. United States*, 524 U.S. 184, 193 (1998) (footnote omitted))); *Rogers v. United States*, 522 U.S.

252, 254-55 (1998) (plurality) (applying presumption to federal firearms statute).

Accordingly, in *Staples*, this Court interpreted a federal statute that criminalized possession of an unregistered "machinegun." 511 U.S. at 602 (describing 26 U.S.C. § 5845(a)(6)). The statute defined a "machingun" as a weapon that shoots "automatically more than one shot, without manual reloading, by a single function of the trigger." *Id.* (quoting 26 U.S.C. § 5845(b)). Although the statute did not contain an express mens rea element, this Court held that one was reasonably implied. *Id.* at 605-06. Consistent with tradition, that mens rea element required that the defendant "knew the weapon he possessed had the characteristics that brought it within the statutory definition of a machine gun." *Id.* at 602. Thus, if the defendant knew he possessed a rifle, but did not know that it would fire multiple rounds with a single pull of the trigger, he could not be convicted of knowingly possessing an unregistered machinegun. He might have knowingly possessed a rifle, which was in fact a machine gun; but he could not knowingly possess a machine gun unless he was knew that it had the features (*i.e.*, the capacity to fire multiple rounds with a single trigger pull) that makes owning it potentially illegal.

The same reasoning applies to controlled substance analogues. It is not enough that the defendant know he possesses a particular compound that (unbeknownst to him) constitutes a controlled substance analogue. He must know that the substance "he possessed had the characteristics that brought it within the statutory definition" of a

controlled substance analogue, *Staples*, 511 U.S. at 602, namely that it is substantially similar in chemical structure and effect to a schedule I controlled substance. After all, that substantial similarity is the "fact[] that make[s] his conduct illegal." *Id.* at 605. To hold a criminal defendant strictly liable for the chemical structure and effects on a substance in his possession is no different from holding a defendant strictly liable for the operation of his firearm.

If there were any ambiguity in the statute, it would be resolved in favor of lenity. *See, e.g.*, *United States v. Wiltberger*, 18 U.S. 76, 95 (1820) ("The rule that penal laws are to be construed strictly, is perhaps not much less old than construction itself.").

2. A narrower scienter requirement, although facilitating prosecutions, could cast serious constitutional doubt on the Analogue Act.

The Due Process Clause requires that "a penal statute define the criminal offense with sufficient definiteness that ordinary people can understand what conduct is prohibited and in a manner that does not encourage arbitrary and discriminatory enforcement." *Kolender v. Lawson*, 461 U.S. 352, 357 (1983). The Analogue Act gives rise to those risks in spades. Congress defined the unlawful conduct in opaque terms, based on criteria that are generally inaccessible to ordinary citizens. The critical phrase "substantially similar" is inherently uncertain. That is doubtless why legislatures rarely criminalize "trespassing and substantially similar conduct" or sales of "machineguns and substantially similar weapons." The vagueness difficulty is only exacerbated by defining the illegal conduct through

reference to a substance's chemical structure, a fact (unlike the mechanics of a firearm) that cannot easily be determined without the use of sophisticated equipment and analysis.

Moreover, even if one knows the chemical structure of a substance and its allegedly similar controlled substance counterpart, the DEA itself has acknowledged to congressional researchers that the "threshold for 'substantially similar' is subjective and may differ from expert to expert."[9] In fact, the "scientific community cannot even agree on a methodology to use to determine structure similarity." *United States v. Forbes*, 806 F. Supp. 232, 237 (D. Colo. 1992). That is hardly surprising – "substantial similarity" is a legal construct, not a scientific term of art.

The risk of arbitrary enforcement is further enhanced by the fact that the substantial similarity test is applied not by an expert agency issuing regulations to provide citizens advanced notice of what the law requires, but by lay jurors after the

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[9] *See* Sacco & Finklea, *supra* note 8, at 16. A DEA official likewise testified before Congress that substantial similarity is "by its nature an 'opinion' and therefore subject to opposing views from other expert chemists." *Bioterrorism, Controlled Substances, and Public Health Issues: Hearing Before the H. Subcomm. on Health, Comm. on Energy and Commerce*, 112th Cong. 17 (July 21, 2011) (statement of Joseph T. Rannazzisi, Deputy Assistant Administrator, Office of Diversion Control, DEA) (hereinafter "DEA Congressional Statement"), *available at* http://www.gpo.gov/fdsys/pkg/CHRG-112hhrg73892/pdf/CHRG-112hhrg73892.pdf.

fact, in decisions that have no effect beyond each individual case. *See* DEA Congressional Statement, *supra* note 9, at 17.

Accordingly, even if ordinary citizens could be expected to be able to discover the chemical structure of alleged analogue substances, they would still be left to guess whether the inevitable combination of similarities and dissimilarities render the substance "substantially similar" to a controlled substance in the minds of a jury faced with competing expert testimony. *Cf. Crutchfield v. Alaska*, 627 P.2d 196, 200 (Alaska 1980) (holding state controlled substance analogue statute unconstitutionally vague as applied where defendant "had no way of discovering the prohibited character of the drug until expert testimony at trial indicated that it had a composition similar to valium," a controlled substance).

In this context, a robust scienter requirement is imperative. A scienter element "may mitigate a law's vagueness, especially with respect to the adequacy of notice to the complainant that his conduct is proscribed." *Vill. of Hoffman Estates v. Flipside Hoffman Estates, Inc.*, 455 U.S. 489, 499 (1982). Contrary to the Fourth Circuit's position, *see Klecker*, 348 F.3d at 71, simply requiring proof that the defendant intended a substance for human consumption will not suffice. The Analogue Act permits sale for human consumption of a wide range of substances, criminalizing only sales of compounds that have a substantially similar chemical structure and effect as a controlled substance. Thus, the Fourth Circuit's interpretation still risks "impos[ing] criminal sanctions on a class of persons whose mental state – ignorance of the characteristics of the

[substances] in their possession – makes their actions entirely innocent." *Staples*, 511 U.S. at 614-15.

While some may be unsympathetic to those attempting to sell otherwise lawful products intended to produce altered psychological states – just as some disapprove of sales of alcohol, tobacco or, for that matter, firearms – we expect the law to clearly define the boundary between legal and illegal conduct, reserving criminal punishment for those who knowingly cross that line. Because the Fourth Circuit's interpretation of the Analogue Act fails that basic standard of our legal tradition, it should be reviewed and reversed.

CONCLUSION

For the foregoing reasons, the petition for a writ of certiorari should be granted.

Respectfully submitted,

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October 2, 2014

APPENDIX

APPENDIX A

PUBLISHED

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 13-4349

UNITED STATES OF AMERICA,
Plaintiff–Appellee,

v.

STEPHEN DOMINICK MCFADDEN, a/k/a Stephen Domin McFadden,
Defendant–Appellant.

Appeal from the United States District Court for the Western District of Virginia, at Charlottesville. Glen E. Conrad, Chief District Judge. (3:12-cr-00009-GEC-1)

Argued: March 19, 2014 Decided: May 21, 2014

Affirmed by published opinion. Judge Keenan wrote the opinion, in which Chief Judge Traxler and Judge Wilkinson joined.

ARGUED: J. Lloyd Snook, III, SNOOK & HAUGHEY, PC, Charlottesville, Virginia, for Appellant. Jean Barrett Hudson, OFFICE OF THE UNITED STATES ATTORNEY, Charlottesville, Virginia, for Appellee. **ON BRIEF:** Timothy J. Heaphy, United States Attorney, Roanoke, Virginia, Ronald M. Huber, Assistant United States Attorney, OFFICE OF THE UNITED STATES ATTORNEY, Charlottesville, Virginia, for Appellee.

BARBARA MILANO KEENAN, Circuit Judge:

This appeal concerns a defendant's convictions involving the sale of "designer drugs," in violation of the Controlled Substance Analogue Enforcement Act of 1986 (the Act), 21 U.S.C. §§ 802(32)(A), 813. Stephen D. McFadden was convicted by a jury of nine charges stemming from his distribution of substances that the government alleged were prohibited by the Act. On appeal, McFadden primarily asserts that the Act is unconstitutionally vague as applied to him, that the district court abused its discretion in making certain evidentiary rulings at trial, and that the government failed to prove that the substances McFadden distributed qualified as controlled substance analogues under the Act. Upon our review, we affirm the district court's judgment.

I.

Before addressing the facts of this case and McFadden's challenges to his convictions, we first provide a brief overview of the Act. Congress enacted

the Act to prevent "underground chemists" from creating new drugs that have similar effects on the human body as drugs explicitly prohibited under the federal drug laws. *See United States v. Klecker,* 348 F.3d 69, 70 (4th Cir. 2003); *see also United States v. Hodge,* 321 F.3d 429, 432, 437 (3d Cir. 2003) (purpose of the Act is to "make illegal the production of designer drugs and other chemical variants of listed controlled substances that otherwise would escape the reach of the drug laws"). To achieve that purpose, Congress mandated that a "controlled substance analogue," when intended for human consumption, be treated under federal law as a Schedule I controlled substance. 21 U.S.C. § 813.

Subject to certain exceptions not at issue in this case, a "controlled substance analogue" is defined under the Act as:

> a substance—
>
> (i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;
>
> (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or
>
> (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on

> the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. § 802(32)(A).

Accordingly, an individual may be convicted for an offense involving a controlled substance analogue under 21 U.S.C. § 841 if the government establishes that: (1) the alleged analogue substance has a chemical structure that is substantially similar to the chemical structure of a controlled substance classified under Schedule I or Schedule II (*the chemical structure element*);[1] (2) the alleged analogue substance has an actual, intended or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than such effect produced by a Schedule I or Schedule II controlled substance (*the pharmacological similarity element*); and (3) the analogue substance is intended for human consumption (*the human consumption element*). *See Klecker*, 348 F.3d at 71 (construing 21 U.S.C. §§ 802(32)(A), 813).

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[1] Controlled substances are classified under one of five schedules, which are set forth in 21 U.S.C. § 812 and 21 C.F.R. §§ 1308.11 through 1308.15.

II.

In July 2011, police investigators in the Charlottesville, Virginia area began investigating the use and distribution of certain synthetic stimulants commonly known as "bath salts." When ingested into the human body, bath salts are capable of producing similar effects as certain controlled substances, including cocaine, methamphetamine, and methcathinone.

The police investigation revealed that bath salts were being sold from a video rental store in Charlottesville, which was owned and operated by Lois McDaniel. Using confidential informants, investigators purchased bath salts from McDaniel, which later were analyzed by the United States Drug Enforcement Administration (DEA). The chemical analysis performed by the DEA showed that these bath salts contained 3, 4–methylenedioxypyrovalerone (MDPV) and 3, 4–methylenedioxymethcathinone (methylone, or MDMC). Government agents later seized from McDaniel's store additional bath salts that contained a combination of MDPV, methylone, and 4–methylethylcathinone (4–MEC).

McDaniel agreed to cooperate with the investigators, and informed them that the bath salts she distributed from her store were supplied by McFadden. At the investigators' direction, McDaniel initiated recorded telephone conversations with McFadden in which she placed orders for bath salts. During these conversations, McFadden discussed the potency and duration of the "high" experienced by

users of the substances he was distributing. He also compared the effects of those substances to certain controlled substances, including cocaine and methamphetamine.

As a result of these transactions, investigators received bath salts supplied by McFadden on five separate occasions. The DEA's analysis showed that two batches of these bath salts contained 4–MEC, MDPV, and methylone. The three other batches contained 4–MEC, but not MDPV or methylone.[2] Based on the findings of this investigation, the grand jury issued a superseding indictment in November 2012, charging McFadden with nine offenses, including one count of conspiracy to distribute substances containing the alleged controlled substance analogues 4–MEC, MDPV, and methylone (collectively, the alleged CSAs), and eight additional counts of distributing these substances.[3]

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[2] During the course of the government's investigation, the DEA, under its emergency temporary scheduling powers in 21 U.S.C. § 811(h), classified MDPV and methylone as Schedule I controlled substances. Schedules of Controlled Substances, 76 Fed.Reg. 65371, 65372 (amending 21 C.F.R. § 1308.11) (Oct. 21, 2011). The government did not allege that McFadden distributed MDPV or methylone after this classification.

[3] The indictment contained the following charges: conspiracy to distribute a substance or mixture containing the controlled substance analogues 4–MEC, MDPV, and methylone, in violation of 21 U.S.C. §§ 841(a)(1), (b)(1)(c) and 846 (Count One); two counts of distribution of a substance or mixture containing MDPV and methylone, in violation of 21 U.S.C. §§ 841(a)(1) and (b)(1)(c) (Counts Two and Three); three counts

The four-day jury trial focused primarily on the issue whether 4–MEC, MDPV, and methylone constitute controlled substance analogues under the Act. To prove the chemical structure element, the government presented the testimony of Dr. Thomas DiBerardino, a chemist employed by the DEA, who qualified as an expert in the field of chemical structures of drugs. Using chemical diagrams as demonstrative exhibits, Dr. DiBerardino testified that the chemical structures of 4–MEC and MDPV are each substantially similar to methcathinone, a Schedule I controlled substance. Dr. DiBerardino further testified, based on the chemical diagrams, that the chemical structure of methylone is substantially similar to ecstasy, which also is a Schedule I controlled substance.

To establish the pharmacological similarity element, the government presented the testimony of Dr. Cassandra Prioleau, a drug science specialist employed by the DEA, who qualified as an expert in the field of pharmacological effects of drugs. Dr. Prioleau testified that 4–MEC and MDPV each would have a pharmacological effect on the central nervous system substantially similar to the effect produced by

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of distribution of a substance or mixture containing 4–MEC, MDPV, and methylone, in violation of 21 U.S.C. §§ 841(a)(1) and (b)(1)(c) (Counts Four, Five, and Six); and three counts of distribution of a substance or mixture containing 4–MEC, in violation of 21 U.S.C. §§ 841(a)(1) and (b)(1)(c) (Counts Seven, Eight, and Nine).

methcathinone. Dr. Prioleau further testified that methylone would have a substantially similar pharmacological effect on the central nervous system as ecstasy.[4]

In his defense, McFadden presented the testimony of Dr. Matthew C. Lee, a primary care physician and pharmacist, who qualified as an expert in the field of pharmacology and the effects of medication. Dr. Lee criticized the methodology used by Dr. DiBerardino in reaching his conclusions regarding the chemical structure element, and further stated that MDPV and methcathinone are not similar in chemical structure.[5] Dr. Lee also criticized the methodology employed by Dr. Prioleau in reaching her conclusions with respect to the pharmacological similarity element. Dr. Lee testified that methylone did not produce similar pharmacological effects as ecstasy, and that there was insufficient scientific data to draw a conclusion that 4–MEC and MDPV produce similar pharmacological effects in humans as methcathinone.

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[4] Dr. Prioleau acknowledged during cross-examination that methylone generally produced only about one-half the stimulant effect of ecstasy, but also noted that at a "maximum dosage" level methylone and ecstasy would have equivalent stimulant effects.

[5] Dr. Lee did not make an explicit conclusion during his testimony about whether 4–MEC and methcathinone, or methylone and ecstasy, were substantially similar in their respective chemical structures.

After hearing this and other evidence, the jury returned a verdict finding McFadden guilty of each of the nine counts alleged in the indictment. At a sentencing hearing, the district court found that McFadden's advisory sentencing guidelines range was between 51 months' and 63 months' imprisonment. After considering the factors set forth in 18 U.S.C. § 3553(a), the court imposed a below-guidelines sentence of 33 months' imprisonment for each conviction, to run concurrently, and a 30–month period of supervised release. McFadden filed a timely notice of appeal.

III.

A.

We first consider McFadden's argument that the Act is unconstitutional as applied to him. This argument presents the central theme that the Act failed to provide a person of ordinary intelligence notice that the conduct at issue was unlawful.

McFadden argues that the Act fails to meet the constitutional requirement of notice because: (1) the Act uses a "standards-based" scheme, employing general terms such as "substantially similar" and "human consumption," and lacks a list of prohibited substances; (2) the Act is subject to arbitrary and discriminatory enforcement in the absence of statutory guidance concerning prohibited conduct; and (3) despite significant efforts on his part to learn about prohibited conduct, McFadden was unable to determine "what he can and cannot do," and was

unaware that the distribution of controlled substance analogues is prohibited under federal law.

We review de novo a challenge to the constitutionality of a federal statute. *United States v. Gibert*, 677 F.3d 613, 618 (4th Cir. 2012). As a general matter, a criminal statute is unconstitutionally vague if it does not sufficiently define an offense such that ordinary people can understand what conduct is prohibited. *Kolender v. Lawson*, 461 U.S. 352, 357 (1983). This inquiry generally requires an examination of what a person of "common intelligence" would reasonably understand the statute to prohibit, rather than what a particular defendant understood the statute to mean. *See United States v. Washam*, 312 F.3d 926, 930 (8th Cir. 2002) (citing *United States v. Nat'l Dairy Prods.*, 372 U.S. 29, 32–33 (1963) and *Connally v. Gen. Constr. Co.*, 269 U.S. 385, 391 (1926)). Additionally, a statute is unconstitutionally vague if its definition of the prohibited conduct encourages arbitrary and discriminatory enforcement. *Kolender*, 461 U.S. at 357–58.

In our decision in *Klecker*, we rejected a nearly identical constitutional challenge as that raised by McFadden. *See* 348 F.3d at 71–72. There, a defendant challenged his convictions for distributing a chemical compound commonly known as "Foxy." *Id.* at 71. The government alleged that Foxy was an analogue of a Schedule 1 controlled substance, diethyltryptamine (DET). *Id.* at 70. We held that the Act was not unconstitutionally vague in its use of the term "substantially similar" with respect to a defendant who lacked actual notice that a substance was a

controlled substance analogue. *Id.* at 72. We observed that the considerable similarities, found from a comparison of chemical diagrams of the alleged analogue substance and the controlled substance, were sufficient to "put a reasonable person on notice" of Foxy's composition as a DET analogue. *Id.*

This holding in *Klecker* defeats McFadden's argument that the term "substantially similar," as used in 21 U.S.C. § 802(32)(A), is unconstitutionally vague when applied to the chemical compounds at issue here. The testimony of Dr. DiBerardino comprehensively addressed the chemical diagrams comparing the chemical structures of 4–MEC and MDPV with methcathinone, and methylone with ecstasy.

Presenting two-dimensional diagrams in which the chemical structures of 4–MEC and MDPV were displayed in an overlapping manner with the chemical structure of methcathinone, Dr. DiBerardino explained that these substances share a core chemical structure, namely that of a compound called phenethylamine. Although the overlapping diagrams showed that the substances each have some unique features in their respective chemical compositions, Dr. DiBerardino testified that these unique features do not affect the chemical core of the substances. Rather, he stated that the diagrams reflected that "[e]verything that's different is on the periphery" of the respective chemical structures. Dr. DiBerardino made the same type of comparison examining the chemical structures of methylone and ecstasy, during which he explained that those substances share the same core chemical structure,

phenethylamine, and that the structural differences between methylone and ecstasy are insignificant.

Based on his evaluation of these diagrams of the chemical compounds at issue, Dr. DiBerardino concluded that the controlled substances and the respective alleged CSAs have substantially similar chemical structures. Thus, Dr. DiBerardino applied the statutory term "substantially similar" in evaluating the core chemical structures of the substances at issue, and was able to distinguish the differences in those structures as peripheral and inconsequential. After reviewing these chemical diagrams, we agree with the district court's conclusion that for purposes of satisfying the constitutional requirement of notice, there are substantial similarities in the chemical structures between the alleged CSAs and their controlled substance counterparts.

We also view the chemical diagrams and Dr. DiBerardino's testimony in light of the evidence concerning McFadden's intent that the alleged CSAs be consumed by humans to produce a stimulant effect. *See Klecker*, 348 F.3d at 72 (observing that defendant's intent that Foxy be ingested as a hallucinogen reinforced the conclusion that the defendant had adequate notice that Foxy would be regarded as a DET analogue). As stated above, McFadden informed McDaniel during recorded telephone conversations that the substances he was distributing produced effects similar to certain

controlled substances.[6] The fact that McFadden intended that the substances he was distributing be used as alternatives to controlled substances further demonstrates that a reasonable person in his position would understand that his conduct was prohibited by the Act. *See id.* In view of this evidence, the district court did not err in concluding that the statutory term "substantially similar," as applied here, would put a reasonable person on notice concerning the proscribed conduct.

We further disagree with McFadden's argument that the statutory term "human consumption" is unconstitutionally vague. *See* 21 U.S.C. § 813. Although McFadden notes correctly that this term is not defined in the Act, the lack of a statutory definition does not render the Act unconstitutional per se. *See Chapman v. United States*, 500 U.S. 453, 462, 467–68 (1991) (holding that 21 U.S.C. § 841(b)(1)(B) is not unconstitutionally vague despite lack of statutory definition of the terms "mixture" and "substance"). A statute need not contain a definition of every term within its text, and, in the absence of a statutory definition, courts will give terms their ordinary meaning. *See United States v. Day*, 700 F.3d 713, 725 (4th Cir. 2012) (citing *Chapman*, 500 U.S. at 462, 467–68).

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[6] As discussed later in this opinion, we disagree with McFadden's argument that the district court erred in admitting the recorded telephone conversations into evidence. *See infra* at 443.

We agree with the district court that, in the context of the Act, the ordinary meaning of the term "human consumption" plainly encompasses the use of a substance by a human being in a manner that introduces the substance into the body. *See* Black's Law Dictionary 359 (9th ed. 2009) (defining "consumption" as "the use of a thing in a way that exhausts it"). We therefore conclude that there is no ambiguity or vagueness in the Act's use of the term "human consumption."

Additionally, we reject McFadden's argument that the Act is unconstitutionally vague because it does not provide a list of substances that qualify as controlled substance analogues. Because the Act provides for the comparison of different chemical compounds to determine whether they are "substantially similar," a list of particular chemical compounds could not encapsulate the variety of substances potentially covered by the Act. Moreover, such a requirement would undermine the very purpose of the Act, which is to prevent individuals from creating slightly modified versions of controlled substances that produce similar effects and entail similar dangers as those controlled substances. *See Klecker*, 348 F.3d at 70; *Hodge*, 321 F.3d at 432, 437.

Given the creativity of individuals manufacturing these analogue substances, *see United States v. Hofstatter*, 8 F.3d 316, 322 (6th Cir. 1993), there is genuine potential that the creation of such substances could outpace any efforts by authorities to identify and catalog them. Thus, we decline to extend our holding in *Klecker* by imposing a constitutional notice requirement that the Act contain a list of

prohibited substances. *See United States v. Fisher*, 289 F.3d 1329, 1337 n. 11 (11th Cir. 2002) (rejecting vagueness challenge and noting that "[n]o list of controlled substance analogues is necessary").

We also find no merit in McFadden's argument that the Act is subject to arbitrary and discriminatory enforcement. We held in *Klecker* that the Act's "intent requirement alone tends to defeat any vagueness challenge based on the potential for arbitrary enforcement." 348 F.3d at 71. We explained that this intent element requires that the government prove that the defendant meant for the substance at issue to be consumed by humans. *Id.; see also United States v. Roberts*, 363 F.3d 118, 126 (2d Cir. 2004) (holding that the "intended for human consumption" element protects against arbitrary enforcement). Arbitrary and discriminatory enforcement further is prevented by the additional statutory requirements that the government prove (1) substantial chemical similarity between the alleged analogue substance and the controlled substance, and (2) actual, intended, or claimed pharmacological similarity of the alleged analogue substance and the controlled substance. *See Klecker*, 348 F.3d at 71. Accordingly, we reject McFadden's arguments that the Act failed to provide him adequate notice of the prohibited conduct and was subject to arbitrary and discriminatory enforcement.

We likewise find no merit in McFadden's argument that the Act is unconstitutional as applied because he "took reasonable steps to inform himself as to the legality of the chemicals that he was selling," and did not find any information indicating

that his actions were illegal. In support of this argument, McFadden relies on the fact that he visited the DEA's website to determine whether the substances at issue were prohibited, but that he did not see the disclaimers on the website discussing the Act and controlled substance analogues.

McFadden's argument fails because it flouts the wellsettled general principle that "ignorance of the law is no excuse." *See United States v. Mitchell*, 209 F.3d 319, 323 (4th Cir. 2000) (citation omitted). Moreover, McFadden provides no authority supporting his novel proposition that we should depart from this general rule because he unsuccessfully sought to determine whether his conduct was lawful. Accordingly, we reject McFadden's argument that the Act is unconstitutional because he lacked notice that the distribution of controlled substance analogues is prohibited under federal law.

B.

We next address McFadden's arguments concerning certain rulings made by the district court during the trial. McFadden contends that the district court erred: (1) in permitting the testimony of Toby Sykes, an individual who purchased bath salts from McDaniel; (2) in admitting into evidence recordings of McFadden's telephone conversations with McDaniel; and (3) in declining to instruct the jury that the government was required to prove that McFadden effectively knew that the substances at issue had the essential characteristics of controlled substance analogues.

1.

The government offered the testimony of Toby Sykes as evidence supporting the pharmacological similarity element. Sykes testified that he was a former methamphetamine addict who purchased bath salts from McDaniel, and that his use of these bath salts produced a far more potent effect on his body than his use of methamphetamine.[7]

McFadden objected to Sykes' testimony on the ground of relevance, because it was uncertain whether the bath salts that Sykes consumed had been supplied by McFadden or were in the same form and doses as those delivered to McDaniel. The district court overruled McFadden's objection, but granted him "great latitude" to cross-examine Sykes concerning whether he could state that the substances he purchased were distributed by McFadden.[8]

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[7] Although Sykes compared the bath salts to methamphetamine rather than methcathinone, Dr. Prioleau testified that various studies showed that MDPV and methylone produce a similar pharmacological effect in laboratory animals as the effect generated by methamphetamine. Accordingly, as the district court found, Sykes' comparison of the bath salts to methamphetamine was consistent with Dr. Prioleau's testimony.

[8] On appeal, McFadden bases his argument concerning Sykes' testimony on relevancy grounds, and does not argue that the testimony should have been struck under Federal Rule of Evidence 403 as having a probative value substantially outweighed by the danger of unfair prejudice.

We review for abuse of discretion a district court's ruling concerning the admissibility of evidence. *United States v. Summers*, 666 F.3d 192, 197 (4th Cir. 2011). Under Rule 402 of the Federal Rules of Evidence, all "relevant" evidence is admissible unless specifically prohibited by the Constitution, a federal statute, or another evidentiary rule. Evidence is relevant if it has a tendency to make a fact pertinent to the case "more or less probable than [the fact] would be without the evidence." Fed. R. Evid. 401; *United States v. Powers*, 59 F.3d 1460, 1465 (4th Cir. 1995). We have observed that the determination of relevance "presents a low barrier to admissibility," and that evidence need only be "worth consideration by the jury" to be admissible. *United States v. Leftenant*, 341 F.3d 338, 346 (4th Cir. 2003) (citation omitted). Accordingly, a district court has broad discretion in determining whether certain evidence is relevant. *United States v. Queen*, 132 F.3d 991, 998 (4th Cir. 1997).

Applying this deferential standard of review, we conclude that the district court did not abuse its discretion in admitting Sykes' testimony. As McFadden concedes, there was some overlap between the period in which Sykes purchased bath salts from McDaniel and the period in which McFadden supplied McDaniel with such substances. Also, importantly, Sykes' description of the packaging of the bath salts he purchased from McDaniel matched the description of the packaging used by McFadden

in distributing the substances. Sykes was shown several exhibits of "blue baggies" containing substances that the government agents had purchased from McDaniel and, on at least one occasion, directly from McFadden. Sykes testified that he recognized the packaging of those exhibits because he had purchased bath salts from McDaniel in similar blue baggies.[9]

Given this foundation evidence tending to show that some of the bath salts consumed by Sykes were supplied by McFadden, Sykes' testimony concerning the bath salts' effect on his body properly was submitted to the jury for purposes of establishing the pharmacological similarity element. Although there were flaws in Sykes' testimony relating to the time period at issue and whether McDaniel altered the substances after receiving them from McFadden, such flaws were explored during cross-examination and were relevant to the weight to be given Sykes' testimony, not to its admissibility. *See Ziskie v. Mineta*, 547 F.3d 220, 225 (4th Cir. 2008) (noting that determining the weight of evidence entails a different inquiry than the relevance inquiry required by Rules 401 and 402 of the Federal Rules of Evidence).

2.

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[9] McDaniel was also shown these exhibits during her testimony, during which she stated that she recognized those items as originating from McFadden because of their distinctive packaging.

We next consider McFadden's challenge to the admission of evidence of recorded telephone conversations between him and McDaniel. In the district court, McFadden objected to this evidence on the ground that the comparisons he made during these conversations were irrelevant to the crimes charged, because he claimed that 4–MEC produced effects similar to cocaine and methamphetamine, controlled substances not used for comparison under the chemical structure element. The district court overruled McFadden's objection, finding that this evidence was relevant to both the pharmacological similarity element and the human consumption element.

On appeal, McFadden argues solely that the district court erred in concluding that the recordings were relevant to the pharmacological similarity element. McFadden does not address the district court's separate conclusion that this evidence was relevant to the human consumption element, nor does he raise an argument that admission of this evidence was unduly prejudicial under Rule 403. Because the human consumption element was an independent basis for the district court's admission of this evidence, we affirm the court's ruling on that basis and do not address McFadden's argument whether the recordings were relevant to proof of the pharmacological similarity element. *See United States v. Hatchett,* 245 F.3d 625, 644–45 (7th Cir. 2001) (holding defendant waived argument concerning district court's ruling on admissibility of evidence by failing to challenge on appeal one of two independent grounds for court's ruling).

3.

McFadden next asserts, on the basis of out-of-circuit precedent, that the district court erred in refusing to instruct the jury that the government was required to prove that he knew, had a strong suspicion, or deliberately avoided knowledge that the alleged CSAs possessed the characteristics of controlled substance analogues. *See United States v. Turcotte,* 405 F.3d 515, 527 (7th Cir. 2005). We review for abuse of discretion the district court's denial of the requested instruction. *United States v. Bartko,* 728 F.3d 327, 343 (4th Cir. 2013). To show an abuse of discretion, a defendant must establish that the proffered instruction: "(1) was correct, (2) was not substantially covered by the charge that the district court actually gave to the jury, and (3) involved some point so important that the failure to give the instruction seriously impaired the defendant's defense." *Id.*

McFadden's argument fails at the outset because he cannot satisfy the first requirement of this test. The instruction he proposed is not a correct statement of the law in this Circuit. In *Klecker,* we set forth the elements that the government was required to prove to obtain a conviction under the Act, including the scienter requirement that the defendant intended that the substance at issue be consumed by humans. 348 F.3d at 71. We further stated that the Act may be applied to a defendant who lacks actual notice that the substance at issue could be a controlled substance analogue. *Id.* at 72.

In contrast to our decision in *Klecker*, the Seventh Circuit has imposed a strict knowledge requirement before a defendant may be convicted of violating the Act. In its decision in *Turcotte*, the court stated that "our precedents demand a showing that the defendant knew the substance in question was a controlled substance analogue." 405 F.3d at 527. Because we have not imposed such a knowledge requirement, and have not included the concepts of "strong suspicion" or "deliberate avoidance" in framing the scienter requirement under the Act, we hold that the district court properly denied McFadden's requested jury instruction.

C.

Finally, we address McFadden's argument challenging the sufficiency of the evidence and the district court's denial of his motion for judgment of acquittal. McFadden's sufficiency argument is limited to his contention that the government failed to satisfy its evidentiary burden of demonstrating that 4–MEC, MDPV, and methylone qualify as controlled substance analogues. McFadden does not otherwise contest the jury's verdict with respect to the conspiracy offense and the substantive counts of distributing controlled substance analogues in violation of the Act.

We review de novo the district court's denial of a motion for judgment of acquittal. *United States v. Hamilton*, 699 F.3d 356, 361 (4th Cir. 2012). In considering a defendant's argument that the evidence was insufficient to support his convictions, we will uphold a jury's verdict if, viewing the evidence in the

light most favorable to the government, there is substantial evidence in the record to support the verdict. *Id.* "Substantial evidence" is "evidence that a reasonable finder of fact could accept as adequate and sufficient to support a conclusion of a defendant's guilt beyond a reasonable doubt." *United States v. Green*, 599 F.3d 360, 367 (4th Cir. 2010).

In conducting this review, we afford the jury's verdict deference because "it is the jury's province to weigh the credibility of the witnesses, and to resolve any conflicts in the evidence." *United States v. Dinkins*, 691 F.3d 358, 387 (4th Cir. 2012) (citation omitted). Accordingly, a defendant challenging the sufficiency of the evidence on appeal bears a "heavy burden," and we will reverse a conviction for insufficient evidence "only in the rare case when the prosecution's failure is clear." *Hamilton*, 699 F.3d at 361–62 (citation and internal quotation marks omitted).

For ease of review, we restate the elements of the distribution offenses for which McFadden was convicted. In addition to proving that McFadden distributed the substances at issue, the government was required to prove that those substances: (1) have a substantially similar chemical structure as a Schedule I or II controlled substance; (2) have a substantially similar or greater pharmacological effect on the human central nervous system as a Schedule I or II controlled substance, which effect was either actual, intended, or represented by the defendant; and (3) were intended by the defendant to be consumed by humans. *See Klecker*, 348 F.3d at 71.

As stated above, the government presented the testimony of Dr. DiBerardino, who concluded that 4–MEC and MDPV are substantially similar in chemical structure as methcathinone, a Schedule I controlled substance. The government also presented the testimony of Dr. Prioleau, who concluded that 4–MEC and MDPV produce a substantially similar pharmacological effect as methcathinone. McFadden asks us to cast aside Dr. DiBerardino and Dr. Prioleau's opinions and adopt the conflicting views of McFadden's expert witness, Dr. Lee. According to Dr. Lee, the scientific methods employed by Dr. DiBerardino and Dr. Prioleau were inadequate to reach their respective conclusions, with which Dr. Lee disagreed.

We recognized long ago that "[a]n appellate court is not the proper forum to refight a battle of expert witnesses." *Connorton v. Harbor Towing Corp.*, 352 F.2d 517, 518 (4th Cir. 1965) (per curiam), *quoted in United States v. Wood*, 741 F.3d 417, 425 (4th Cir. 2013). That fight was waged in the district court in this case, and the jury chose to accept the conclusions of Dr. DiBerardino and Dr. Prioleau, despite defense counsel's vigorous cross-examination of those witnesses and the opposing testimony of Dr. Lee.

It would be improper under our standard of review to elevate Dr. Lee's opinion over the opinions of Dr. DiBerardino and Dr. Prioleau, because it is the jury's function to weigh witnesses' credibility, to determine the weight to be accorded their testimony, and to resolve conflicts in the evidence. *Dinkins*, 691 F.3d at 387; *United States v. Maceo*, 873 F.2d 1, 7 (1st

Cir. 1989). Therefore, based on the record before us, we conclude that the government presented sufficient evidence that 4–MEC and MDPV are substantially similar in chemical structure as methcathinone, a Schedule 1 substance. We further conclude that the government presented sufficient evidence that 4–MEC and MDPV produce actual pharmacological effects on the central nervous system substantially similar to the effects produced by methcathinone.[10] In light of this conclusion concerning "actual" pharmacological similarity, we need not address McFadden's argument that there was insufficient proof that he "represented or intended" that 4–MEC and MDPV would have substantially similar pharmacological effects as a controlled substance.[11] *See Klecker,* 348 F.3d at 71 (government may establish the pharmacological similarity element by showing "actual, intended, *or* claimed" similarity) (emphasis added).

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[10] We note that because the jury's verdict is well-supported by Dr. DiBerardino and Dr. Prioleau's testimony, we need not consider Sykes' testimony in determining whether the government proved actual pharmacological similarity of these substances at issue.

[11] We therefore need not reach McFadden's arguments concerning his statements to McDaniel that 4–MEC and mixtures containing 4–MEC have an effect similar to substances other than methcathinone, and do not decide whether the pharmacological similarity element may be established by comparing the alleged analogue substance to a different controlled substance than used for comparison under the chemical structure element.

Having reached this conclusion with respect to 4–MEC and MDPV, we need not address whether there was sufficient evidence in the record to conclude that methylone qualified as a controlled substance analogue. Each of the charges in the superseding indictment relating to methylone also alleged in the conjunctive that McFadden distributed MDPV or 4–MEC with respect to those counts. In other words, none of the charges hinged on a finding that methylone qualified as a controlled substance analogue.[12] Accordingly, even if we agreed with McFadden's arguments relating to methylone, we nevertheless would affirm each of his convictions. *See Turner v. United States*, 396 U.S. 398, 420 (1970) (reaffirming the general rule that if an indictment charges several acts in the conjunctive, a guilty verdict stands if the evidence is sufficient with respect to any one of the acts); *United States v. Bollin*, 264 F.3d 391, 412 n. 14 (4th Cir. 2001) (in case involving perjury allegation charged in the conjunctive pertaining to two alleged false statements, holding that Court need not reach arguments pertaining to the first alleged false statement because evidence supported jury verdict relating to the second alleged false statement).

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[12] We further observe that because the government agreed to remove methylone from the calculation of drug weight for purposes of determining McFadden's advisory sentencing guidelines range, methylone was not a factor in the court's determination of McFadden's sentence.

IV.

For these reasons, we affirm the district court's judgment.

AFFIRMED.

APPENDIX B

UNITED STATES DISTRICT COURT
Western District of Virginia

UNITED STATES OF AMERICA

v.

Stephen Dominick McFadden

JUDGEMENT IN A CRIMINAL CASE

Case Number: DVAW312CR000009-001

Case Number:

USM Number: 65902-053

John Lloyd Snook III, Esq. and Louis Elias Diamond, Esq.

Defendant's Attorney

THE DEFENDANT:

☐ pleaded guilty to count(s)_____

☐ pleaded nolo contendere to count(s) which was accepted by the court. _____

☒ was found guilty on count(s) after a plea of not guilty, 1, 2, 3, 4, 5, 6, 7, 8 and 9 _____

The defendant is adjudicated guilty of these offenses:

Title & Section	Nature of Offense	Offense Ended	Count
21 U.S.C. §§ 846 and 841(b)(1)(C)	Conspiracy to Distribute MDPV, MDMC and 4-MEC, Controlled Substance Analogues	02/15/2012	1
21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution of MDPV and MDMC, Controlled Substance Analogues	07/25/2011	2
21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution of MDPV and MDMC, Controlled Substance Analogues	08/11/2011	3

The defendant is sentenced as provided in pages 2 through _7_ of this judgment. The sentence is imposed pursuant to the Sentencing Reform Act of 1984.

☐ The defendant has been found not guilty on count(s) _____

☐ Count(s) _____ ☐ is ☐ are dismissed on the motion of the United States.

It is ordered that the defendant must notify the United States attorney for this district within 30 days of any change of name, residence or mailing address until all fines, restitution, costs, and special assessments imposed by this judgment are fully paid. If ordered to pay restitution, the defendant must notify the court and United States attorney of material changes in economic circumstances.

April 29, 2013
Date of Imposition of Judgment

/s/ Glen E. Conrad
Signature of Judge

Glen E. Conrad, Chief United States District Judge
Name and Title of Judge

April 30, 2013
Date

ADDITIONAL COUNTS OF CONVICTION

Title & Section	Nature of Offense	Offense Ended	Count
21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution of MDPV and MDMC, and 4-MEC, Controlled Substance Analogues	08/24/2011	4
21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution of MDPV and MDMC, and 4-MEC, Controlled Substance Analogues	08/26/2011	5
21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution of MDPV and MDMC, and 4-MEC, Controlled Substance Analogues	09/16/2011	6
21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution 4-MEC, Controlled Substance Analogues	10/27/2011	7

21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution 4-MEC, Controlled Substance Analogues	01/06/2012	8
21 U.S.C. §§ 841(a)(1) and(b)(1)(C)	Distribution 4-MEC, Controlled Substance Analogues	02/02/2012	9

IMPRISONMENT

The defendant is hereby committed to the custody of the United States Bureau of Prisons to be imprisoned for a total term of:
Thirty Three (33) Months as to each of Counts One through Nine (1-9), to run concurrently.

☒ The court makes the following recommendations to the Bureau of Prisons: Placement as near as possible to defendant's home in Staten Island, New York.

☐ The defendant is remanded to the custody of the United States Marshal.

☐ The defendant shall surrender to the United States Marshal for this district:

- ☐ at _____ ☐ a.m. ☐ p.m. on _____
- ☐ as notified by the United States Marshal.

☒ The defendant shall surrender for service of sentence at the institution designated by the Bureau of Prisons:

- ☐ before _____ on _____
- ☒ as notified by the United States Marshal.
- ☐ as notified by the Probation or Pretrial Services Office.

RETURN

I have executed this judgment as follows:

Defendant delivered on _____ to _____ a _____, with a certified copy of this judgment.

_____
United States Marshal

By _____
Deputy United States Marshall

SUPERVISED RELEASE

Upon release from imprisonment, the defendant shall be on supervised release for a term of:

Thirty (30) Months as to each of Counts One through Nine (1-9), to run concurrently.

The defendant must report to the probation office in the district to which the defendant is released within 72 hours of release from the custody of the Bureau of Prisons.

The defendant shall not commit another federal, state or local crime.

The defendant shall not unlawfully possess a controlled substance. The defendant shall refrain from any unlawful use of a controlled substance. The defendant shall submit to one drug test within 15 days of release from imprisonment and at least two periodic drug tests thereafter, as determined by the court.

☐ The above drug testing condition is suspended, based on the court's determination that the defendant poses a low risk of future substance abuse. (*Check, if applicable.)*

☒ The defendant shall not possess a firearm, ammunition, destructive device, or any other dangerous weapon. *(Check, if applicable.)*

☒ The defendant shall cooperate in the collection of DNA as directed by the probation officer. *(Check, if applicable.)*

☐ The defendant shall comply with the requirements of the Sex Offender Registration and Notification Act (42 U.S.C. § 16901, *et seq.*) as directed by the probation officer, the Bureau of Prisons, or any state sex offender registration agency in which he or she resides, works, is a student, or was convicted of a qualifying offense. *(Check, if applicable)*

☐ The defendant shall participate in an approved program for domestic violence. *(Check, if applicable.)*

If this judgment imposes a fine or restitution, it is a condition of supervised release that the defendant pay in accordance with the Schedule of Payments sheet of this judgment.

The defendants must comply with the standard conditions that have been adopted by this court as well as with any additional conditions on the attached page.

STANDARD CONDITIONS OF SUPERVISION

1) the defendant shall not leave the judicial district without the permission of the court or probation officer;
2) the defendant shall report to the probation officer in a manner and frequency directed by the court or probation officer;

3) the defendant shall answer truthfully all inquiries by the probation officer and follow the instructions of the probation officer;
4) the defendant shall support his or her dependents and meet other family responsibilities;
5) the defendant shall work regularly at a lawful occupation, unless excused by the probation officer for schooling, training, or other acceptable reasons;
6) the defendant shall notify the probation officer at least ten days prior to any change in residence or employment;
7) the defendant shall refrain from excessive use of alcohol and shall not purchase, possess, use, distribute, or administer any controlled substance or any paraphernalia related to any controlled substances, except as prescribed by a physician;
8) the defendant shall not frequent places where controlled substances are illegally sold, used, distributed, or administered;
9) the defendant shall not associate with any persons engaged in criminal activity and shall not associate with any person convicted of a felony, unless granted permission to do so by the probation officer;
10) the defendant shall permit a probation officer to visit him or her at any time at home or elsewhere and shall permit confiscation of any contraband observed in plain view of the probation officer;
11) the defendant shall notify the probation officer within seventy-two hours of being arrested or questioned by a law enforcement officer;

12) the defendant shall not enter into any agreement to act as an informer or a special agent of a law enforcement agency without the permission of the court; and
13) as directed by the probation officer, the defendant shall notify third parties of risks that may be occasioned by the defendant's criminal record or personal history or characteristics and shall permit the probation officer to make such notifications and to confirm the defendant's compliance with such notification requirement.

SPECIAL CONDITIONS OF SUPEVISION

1. The defendant shall pay any special assessment and fine that are imposed by this judgment.
2. The defendant shall reside in a residence free of firearms, ammunition, destructive devices, and dangerous weapons.
3. The defendant shall submit to warrantless search and seizure of person and property as directed by the probation officer, to determine whether the defendant is in possession of firearms and illegal controlled substances.

CRIMINAL MONETARY PENALTIES

The defendant must pay the total criminal monetary penalties under the schedule of payments on Sheet 6.

	Assessment	Fine	Restitution
TOTALS	$900.00	$1,000.00	$

☐ The determination of restitution is deferred until _____. An *Amended Judgment in a Criminal Case* (AO 245C) will be entered after such determination.

☐ The defendant must make restitution (including community restitution) to the following payees in the amount listed below.

If the defendant makes a partial payment, each payee shall receive an approximately proportioned payment, unless specified otherwise in the priority order or percentage payment column below. However, pursuant to 18 U.S.C. § 3664(i), all nonfederal victims must be paid before the United States is paid.

Name of Payee	Total Loss*	Restitution Ordered	Priority or Percentage
TOTALS	$0.00	$0.00	

☐ Restitution amount ordered pursuant to please agreement $ _____

☐ The defendant must pay interest on restitution and a fine of more than $2,500, unless the restitution or fine is paid in full before the fifteenth day after the date of the judgment, pursuant to 18 U.S.C. § 3612(f). All of the payment options on Sheet 6 may be subject to penalties for delinquency and default, pursuant to 18 U.S.C. § 3612(g).

☐ The court determined that the defendant does not have the ability to pay interest and it is ordered that:

  ☐ the interest requirement is waived for the ☐ fine ☐ restitution.

  ☐ the interest requirement for the ☐ fine ☐ restitution is modified as follows:

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* Findings for the total amount of losses are required under Chapters 109A, 110, 110A, and 113A of Title 18 for offenses committed on or after September 13, 1994, but before April 13, 1996.

SCHEDULE OF PAYMENTS

Having assessed the defendant's ability to pay, the total criminal monetary penalties are due immediately and payable as follows:

A ☒ Lump sum payment of $900.00 immediately, balance payable

☐ not later than _____, or

☐ in accordance ☐ C, ☐ D, ☐ E, ☒ F or, ☐ G below); or

B ☐ Payment to begin immediately (may be combined with ☐ C, ☐ D, ☐ F, or ☐ G below); or

C ☐ Payment in equal _____ (e.g., weekly, monthly, quarterly) installments of $_____ over a period of _____ (e.g., months or years), to commence _____ (e.g., 30 or 60 days) after the date of this judgment; or

D ☐ Payment in equal _____ (e.g., weekly, monthly, quarterly) installments of $_____ over a period of _____ (e.g., months or years), to commence _____ (e.g., 30 or 60 days) after release from imprisonment to a term of supervision; or

E ☐ Payment during the term of supervised release will commence within _____ (e.g., 30 or 60 days) after release from imprisonment. The court will set the payment plan based on an assessment of the defendant's ability to pay at that time; or

F ☒ During the term of imprisonment, payment in equal _monthly_ (e.g., weekly, monthly, quarterly) installments of $ 50 , or 50 % of the defendant's income, whichever is _less_ to commence _60 days_ (e.g., 30 or 60 days) after the date of this judgment; AND payment in equal _monthly_ (e.g., weekly, monthly, quarterly) installments of $ 100 during the term of supervised release, to commence _60 days_ (e.g., 30 or 60 days) after release from imprisonment.

G ☐ Special instructions regarding the payment of criminal monetary penalties:

Any installment schedule shall not preclude enforcement of the restitution or fine order by the United States under 18 U.S.C. §§ 3613 and 3664(m).

Any installment schedule is subject to adjustment by the court at any time during the period of imprisonment or supervision, and the defendant shall notify the probation officer and the U.S. Attorney of any change in the defendant's economic circumstances that may affect the defendant's ability to pay.

All criminal monetary penalties shall be made payable to the Clerk, U.S. District Court, P.O. Box 1234, Roanoke, Virginia 24006, for disbursement.

The defendant shall receive credit for all payments previously made toward any criminal monetary penalties imposed.

Any obligation to pay restitution is joint and several with other defendants, if any, against whom an order of restitution has been or will be entered.

☐ Joint and Several
Defendant and Co-Defendant Names and Case Numbers (including defendant number), Total Amount, Joint and Several Amount, and corresponding payee, if appropriate.

☐ The defendant shall pay the cost of prosecution.

☐ The defendant shall pay the following court cost(s):

☒ He defendant shall forfeit the defendant's interest in the following property to the United States:
as noted in the attached order of forfeiture.

Payments shall be applied in the following order: (1) assessment, (2) restitution principal, (3) restitution interest, (4) fine principal, (5) fine interest, (6) community restitution, (7) penalties, and (8) costs, including cost of prosecution and court costs.

APPENDIX C

MAY 10, 2013

UNITED STATES DISTRICT COURT, FOR THE WESTERN DISTRICT OF VIRGINIA
CHARLOTTESVILLE DIVISION

UNITED STATES OF AMERICA	)	Criminal Action No. 3:12CR00009
	)	
v.	)	**MEMORANDUM OPINION**
	)	
STEPHEN DOMINICK McFADDEN,	)	By: Hon. Glen E. Conrad, Chief United States District Judge
	)	
Defendant,	)	
	)	

This case is presently before the court on the defendant's motion for judgment of acquittal. For the reasons set forth below, the motion will be denied.

Background

On November 14, 2012, the defendant, Stephen Dominick McFadden, was charged in a nine-count superseding indictment returned by a grand jury in the Western District of Virginia. Count One charged the defendant with conspiring to distribute and possess with intent to distribute, for human consumption, controlled substance analogues, in violation of 21 U.S.C. § 841(a)(1) and 846. Counts Two through Nine charged the defendant with

distributing controlled substance analogues, for human consumption, in violation of 21 U.S.C. § 841(a)(1).

The charges stemmed from McFadden's sale and distribution of products marketed as "bath salts," which contained one or more of the following substances: 3,4–methylenedioxymethcathinone (commonly known as "methylone" or "MDMC"); 3,4–methylenedioxypyrovalerone (commonly known as "MDPV"); and 4–methyl–ethylcathinone (commonly known as "4–MEC"). The indictment alleged that methylone, MDPV, and 4–MEC were controlled substance analogues during the time periods charged in the indictment, and that McFadden's activities were therefore unlawful under the Controlled Substance Analogue Enforcement Act of 1986 ("Analogue Act"). *See* 21 U.S.C. §§ 802(32), 813.[1]

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[1] On October 21, 2011, the Drug Enforcement Administration exercised its emergency scheduling authority to designate methylone and MDPV as Schedule I controlled substances for at least one year. *See* 76 Fed.Reg. 65371 (Oct. 21, 2011) (amending 21 C.F.R. § 1308.11(g) to include methylone and MDPV). The superseding indictment reflected these amendments. Count One charged that, prior to October 21, 2011, the defendant conspired to distribute a mixture or substance containing methylone, MDPV, and 4–MEC, and that from October 21, 2011 until February 15, 2012, the defendant conspired to distribute a mixture or substance containing 4–MEC. Likewise, Counts Seven, Eight, and Nine, which charged conduct occurring after October 21, 2011, related solely to the distribution of 4–MEC, which remains unscheduled.

McFadden's co-defendant, Lois McDaniel, began selling bath salts from her video store in Charlottesville, Virginia in 2011. During the course of investigating McDaniel, law enforcement agents determined that she was purchasing the bath salts from a supplier in New York, later identified as McFadden. On February, 15, 2012, a search warrant was executed at an office unit occupied by McFadden in Staten Island, New York. During the search, agents recovered bath salts, scales, plastic bags, and other items associated with the distribution of these substances.

McFadden went to trial, and, on January 10, 2013, a jury returned a verdict of guilty on all nine counts. McFadden subsequently filed a motion for judgment of acquittal, in which he challenges the constitutionality of the Analogue Act; the propriety of the court's instructions to the jury; the admission of certain expert testimony; and the sufficiency of the evidence to support his convictions.

Discussion

I. *The Constitutionality of the Analogue Act*

McFadden contends that the Analogue Act is unconstitutionally vague as applied to him. The Act defines a "controlled substance analogue" as:

> a substance—
> (i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;

> (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II;
>
> or
>
> (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. § 802(32)(A).[2] The Act further provides that "[a] controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I." 21 U.S.C. § 813.

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[2] Although § 802(32)(A) contains the word "or" between clauses (ii) and (iii), the "vast majority of federal courts ... have adopted [a] conjunctive reading," which requires a controlled substance analogue to satisfy both clause (i) and either clause (ii) or (iii). *United States v. Turcotte*, 405 F.3d 515, 522 (7th Cir. 2005) (citing cases). Since both parties advocated for a conjunctive reading of the statute, the court assumed, for purposes of this case, that it is the correct one.

"Due process requires that a criminal statute provide adequate notice to a person of ordinary intelligence that his contemplated conduct is illegal, 'for no man shall be held criminally responsible for conduct which he could not reasonably understand to be proscribed.' " *Buckley v. Valeo,* 424 U.S. 1, 77 (1976) (quoting *United States v. Harriss,* 347 U.S. 612, 617 (1954)). Thus, "[t]he void-for-vagueness doctrine requires that penal statutes define the criminal offense with sufficient definiteness that ordinary people can understand what conduct is prohibited and in a manner that does not encourage arbitrary and discriminatory enforcement." *Kolender v. Lawson,* 461 U.S. 352, 357 (1983). "[V]agueness challenges to statutes which do not involve First Amendment freedoms must be examined in the light of the facts of the case at hand." *United States v. Mazurie,* 419 U.S. 544, 550 (1975).

Under existing circuit precedent interpreting the Analogue Act, McFadden is unable to establish that the Act lends itself to arbitrary enforcement. In *United States v. Klecker,* 348 F.3d 69 (4th Cir. 2003), the United States Court of Appeals for the Fourth Circuit held that "[t]he requirement of preventing arbitrary enforcement is easily satisfied" by the Analogue Act. *Id.* at 71. In reaching this conclusion, the Fourth Circuit explained as follows:

> In order to show an Analogue Act violation, the Government must prove (1) substantial *chemical* similarity between the alleged analogue and a controlled substance; *see* 21 U.S.C. § 802(32)(A)(i); (2) actual, intended, or claimed *physiological* similarity (in other

> words, that the alleged analogue has effects similar to those of a controlled substance or that the defendant intended or represented that the substance would have such effects), *see id.* § 802(32)(A)(ii), (iii); and (3) *intent* that the substance be consumed by humans, *see id.* § 813. The intent requirement alone tends to defeat any vagueness challenge based on the potential for arbitrary enforcement.

Id. (emphasis in original) (additional internal citations omitted); *see also United States v. Hofstatter*, 8 F.3d 316, 322 (6th Cir. 1993) (rejecting a similar vagueness challenge and holding that the intent requirement set forth in 21 U.S.C. § 813 "sufficiently constrains law enforcement officials and discourages arbitrary or discriminatory application of the laws").

The court also rejects McFadden's argument that the Analogue Act fails to provide adequate notice that distributing a mixture or substance containing methylone, MDPV, or 4–MEC would be unlawful. In reaching this decision, the court is again guided by the Fourth Circuit's opinion in *Klecker*. While *Klecker* involved substances other than methylone, MDPV, and 4–MEC, its analysis is instructive. Specifically, in addressing the issue of adequate notice, the Fourth Circuit determined that it was "useful to compare chemical diagrams of the controlled substance and the alleged analogue." *Id.* at 72 (citing *United States v. McKinney*, 79 F.3d 105, 108 (8th Cir. 1996), *vacated on other grounds*, 520 U.S. 1226 (1997)). The diagrams admitted into evidence in *Klecker* demonstrated similarities between DET, a controlled

substance, and Foxy, the alleged analogue. *Id.* Although there were "important differences" between the two substances, the Fourth Circuit held that "the similarities in their structures would put a reasonable person on notice that Foxy might be regarded as a DET analogue, particularly if that person intended (as Klecker plainly did) that Foxy be ingested as a hallucinogen." *Id. Accord McKinney*, 79 F.3d at 108 (rejecting the defendant's vagueness challenge to the Analogue Act and emphasizing that "a reasonable layperson could, for example, have examined a chemical chart and intelligently decided for himself or herself, by comparing their chemical diagrams, whether the chemical structure of two substances were substantially similar"). While the record in *Klecker* contained evidence indicating that the defendant was aware that Foxy was a controlled substance analogue, the Fourth Circuit concluded that "the Analogue Act would not be unconstitutionally vague as applied to Foxy even with respect to a defendant who lacked actual notice." *Klecker*, 348 F.3d at 72.

In this case, one of the government's experts, Tom DiBerardino, a chemist with the Drug Enforcement Administration, testified regarding the chemical structures of MDPV, 4–MEC, and methylone. DiBerardino opined that the chemical structures of MDPV and 4–MEC are substantially similar to that of methcathinone, a Schedule I controlled substance, and that the chemical structure of methylone is substantially similar to that of MDMA, which is also known as ecstasy. During DiBerardino's testimony, the government presented

diagrams of each substance's chemical structure for the jury to compare. The government also presented diagrams on which the chemical structures of the alleged analogues were superimposed on the respective controlled substances to further emphasize their common features. Having examined the chemical diagrams, the court is convinced that they would put a reasonable person on notice that MDPV and 4–MEC might be regarded as analogues of methcathinone, given the considerable similarities in their chemical structures. The court likewise concludes that the similarities between the chemical structures of methylone and MDMA would put a reasonable person on notice that methylone might be regarded as an MDMA analogue. This is particularly true if that person intended for the analogues to be consumed as alternatives to illicit stimulants, and, in this case, the government's evidence, viewed in its favor, established that this was McFadden's intention.

McFadden's remaining statutory challenges fare no better. The fact that the Analogue Act "does not specify any particular drug that may not be sold" does not render it unconstitutionally vague. (Docket No. 134 at 8.) As other courts have recognized, "[t]he object of the Analogue Act is to prevent underground chemists from producing slightly modified drugs that are legal but have the same effects and dangers as scheduled controlled substances." *United States v. Hodge*, 321 F.3d 429, 432 (3d Cir. 2003); *see also United States v. Washam*, 312 F.3d 926, 933 (8th Cir. 2002) ("One of Congress's purposes for passing the Analogue Statute was to prohibit innovative drugs

that are not yet listed as controlled substances."). Under the existing law, "all substances that meet the definition of a controlled substance analogue are illegal" and, thus, "[n]o list of controlled substance analogues is necessary." *United States v. Fisher*, 289 F.3d 1329, 1337 (11th Cir. 2002). Indeed, "[g]iven the creativity of amateur chemists, such a list might well be impossible to compile." *Hofstatter*, 8 F.3d at 322. Accordingly, the court agrees with the government that the failure to specifically list controlled substance analogues does not render the Analogue Act impermissibly vague.

The court is also unpersuaded by the defendant's argument that the failure to define the term "human consumption" renders the Analogue Act void for vagueness. It is well settled that "a criminal statute need not define explicitly every last term within its text, for as the Supreme Court has repeatedly explained, where 'terms used in a statute are undefined, we give them their ordinary meaning.'" *United States v. Day*, 700 F.3d 713, 725 (4th Cir. 2012) (quoting *Jones v. United States*, 529 U.S. 848, 855 (2000)); *see also Chapman v. United States*, 500 U.S. 453, 462 (1991) (construing the undefined term "mixture" in 21 U.S.C. § 841(b)(1)(B)(v) by looking to its ordinary meaning and holding that such a construction did not leave the statute unconstitutionally vague).

Here, the court is convinced that the ordinary meaning of the term "human consumption," as it is used in the context of the Analogue Act, clearly encompasses the use of a substance, by a human being, in a manner that would introduce the

substance into the body. This conclusion is supported by legal dictionaries, which define "consumption" to include "use." *See, e.g., Black's Law Dictionary* 359 (9th ed. 2009) (defining "consumption" as "the use of a thing in a way that exhausts it"); *Ballentine's Law Dictionary* (3d ed. 2010) (available on LEXIS) (defining "consumption" as "use of a thing, sometimes, but not necessarily, to the complete extermination of the thing."). The conclusion is further supported by case law and statutes from other jurisdictions defining "consumption" and "human consumption," in the context of controlled substances. *See State v. Ireland,* 2005 UT App. 22, P19, 106 P.3d 753 (Utah Ct.App. 2005) (concluding that the term "consumption," as used in a state controlled substance statute, described the introduction of a substance into the body); *see also* Tex. Health & Safety Code § 481.002(21) (defining "human consumption" as "the injection, inhalation, ingestion, or application of a substance to or into the human body"); Mich. Comp. Laws Serv. § 333.7105(8) (defining "human consumption" to mean "application, injection, inhalation, or ingestion by a human being"); N.M. Stat. Ann. § 30–31–2(X) (defining "human consumption" to include "application, injection, inhalation, ingestion, or any other manner of introduction").

The court, thus, rejects McFadden's argument that "the only definition of [human consumption] that would seem to make sense in context would embrace the idea of 'eat or drink.' " (Docket No. 134 at 14.) Such a limited reading would be completely at odds with the purpose of the Analogue Act. As many

controlled substances are commonly used by injection and inhalation, the court does not think that Congress could have intended for the term "human consumption" to exclude such methods, or for the Act to otherwise extend only to analogues that are taken like food or drink. Instead, the court holds that other methods of introducing a substance into the body fall within the ordinary meaning of the term "human consumption," as that term is used in the statute.

For all of these reasons, the court concludes that the Analogue Act is not unconstitutionally vague as applied to methylone, MDPV, and 4–MEC.

II. *The Court's Instructions to the Jury*

McFadden next argues that the court improperly instructed the jury on the elements of the conspiracy and distribution offenses charged in the indictment. During trial, McFadden requested an instruction that would have (1) advised the jury that a substance does not qualify as a controlled substance analogue unless it is both chemically similar to a particular controlled substance and physiologically similar to the same controlled substance; and (2) specified the controlled substance to which each of the alleged analogues must be compared. McFadden also proposed an instruction that would have required the government to prove, inter alia, that the defendant knew that chemical structures of the substances at issue were substantially similar to the chemical structures of controlled substances in Schedule I or II. The court instead gave its own instructions, to which McFadden objected.

For the conspiracy offense charged in Count One of the indictment, the jury was instructed that it had to be convinced that the government had proven each of the following elements beyond a reasonable doubt:

> FIRST: That beginning in or around June 2011, and continuing until February 15, 2012, two or more persons, directly or indirectly, reached an agreement or understanding to accomplish a common plan;
>
> SECOND: That the defendant knew the purpose of the agreement, and joined in it willfully, that is, with the intent to further the purpose of the plan;
>
> THIRD: That the purpose of the plan was to distribute or possess with intent to distribute, for human consumption, a mixture or substance containing MDPV, MDMC/Methylone, or 4–MEC, which has an actual intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to that or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; and
>
> FOURTH: That the chemical structure of MDPV, MDMC/Methylone, or 4–MEC is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act.

(Docket No. 152 at 23–24.)

For the offense of distributing a controlled substance analogue, as charged in Counts Two through Nine of the indictment, the jury was instructed that the government was required to prove, as to each count, the following essential elements beyond a reasonable doubt:

> FIRST: That the defendant knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act;
>
> SECOND: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act; and
>
> THIRD: That the defendant intended for the mixture or substance to be consumed by humans.

(*Id.* at 34.)

After further review, the court remains convinced that the foregoing instructions are consistent with the plain language of the Analogue Act and the Fourth Circuit's decision in *Klecker*. The

second and third clauses of § 802(32)(A), which relate to actual and claimed physiological effects, require the alleged analogue to be substantially similar to "*a* controlled substance," rather than "*the* controlled substance" used to prove chemical similarity in clause (i). 21 U.S.C. § 802(32)(A) (emphasis added). Likewise, in setting forth the elements that must be proven to establish an Analogue Act violation, the Fourth Circuit observed that the government must prove substantial chemical similarity between the alleged analogue and "a controlled substance," and "that the alleged analogue has effects similar to those of a controlled substance or that the defendant intended or represented that the substance would have such effects." *Klecker*, 348 F.3d at 71 (emphasis added). The court elected to use the same language in instructing the jury in this case, and the defendant has failed to persuade the court that the instructions were in error in this regard.

The court is also of the opinion that its instructions on the scienter elements of the conspiracy and distribution offenses were appropriate. As set forth above, the court's instructions required the government to prove that the defendant intended for the substances to be consumed by humans, in accordance with 21 U.S.C. § 813. The court's instructions also required the government to prove that the defendant knowingly and intentionally distributed a substance that had an actual, intended, or claimed physiological effect that was substantially similar to or greater than that of a controlled substance, and that the purpose of the conspiratorial agreement was to distribute or possess

with intent to distribute such substances. While McFadden would have also required the government to prove that he knew that the alleged analogues have a chemical structure that is substantially similar to the chemical structure of a controlled substance and, thus, that they were, in fact, controlled substance analogues under the Act, the court remains convinced that this is not required by the statute or Fourth Circuit precedent. *See Id.* at 71–72 (setting forth the elements of an Analogue Act violation and noting that the Act "would not be unconstitutionally vague as applied to Foxy even with respect to a defendant who lacked actual notice [that Foxy was a controlled substance analogue]"); *see also United States v. Desurra*, 865 F.2d 651, 653 (5th Cir. 1989) ("If a defendant possesses an analogue, with intent to distribute or import, the defendant need not know that the drug he possesses is an analogue. It suffices that he know what drug he possesses, and that he possess it with the statutorily defined bad purpose."); *but see United States v. Turcotte*, 405 F.3d 515, 522 (7th Cir. 2005) (holding that "[a] defendant must know that the substance at issue has a chemical structure substantially similar to that of a controlled substance, and he or she must either know that it has similar physiological effects or intend or represent that it has such effects").

The court also declined to give the defendant's proposed instruction distinguishing a conspiracy from a buyer-seller relationship, and instead gave its own buyer-seller instruction to the jury. To the extent defendant maintains that this decision was erroneous, the court disagrees.

The court's instructions to the jury on the conspiracy count included the following:

> I ... tell you that the existence of a mere buyer-seller relationship alone is insufficient to support a conspiracy conviction, even if the buyer intends to resell the purchased drugs to others. However, you may consider the purchase of drugs for resale, along with all the other evidence, in determining whether there was a conspiratorial agreement between the buyer and seller, or other persons, to distribute or possess with intent to distribute, controlled substance analogues.

(Docket No. 152 at 29.) This instruction is clearly consistent with existing Fourth Circuit precedent. *See United States v. Hackley*, 662 F.3d 671, 679 (4th Cir. 2011) ("We have held that evidence of a continuing buy-sell relationship when coupled with evidence of large quantities of drugs, or continuing relationships and repeated transactions, creates a reasonable inference of [a conspiratorial] agreement.") (internal citation and quotation marks omitted); *United States v. Mills*, 995 F.2d 480, 485 n. 1 (4th Cir. 1993) (noting that "evidence of a buy-sell transaction is at least relevant (i.e. probative) on the issue of whether a conspiratorial relationship exists").

McFadden's proposed instruction, taken from a former edition of the Seventh Circuit Pattern Federal Jury Instructions, included a list of nine factors that the jury could consider in deciding whether a buyer

and a seller formed a conspiracy to distribute controlled substance analogues.[3] Based on the Seventh Circuit's criticism of the instruction in *United States v. Colon,* 549 F.3d 565, 570–571 (7th Cir. 2008), the instruction has been modified to delete the factors requested by McFadden. *See* Pattern Federal Jury Instructions for the Seventh Circuit—Criminal, No. 5.10(A) (2012 ed.) ("In *Colon,* the Seventh Circuit was critical of the previously-adopted pattern instruction on this point, which included a list of factors to be considered. The Committee has elected to simplify the instruction....").

Accordingly, for the reasons stated, the court concludes that McFadden's motion must be denied to the extent he argues that the court erred in rejecting his proffered jury instructions.

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[3] The requested factors were as follows: (1) whether the seller extended credit to the buyer for the purchase of the controlled substance analogues; (2) whether the seller instructed the buyer in how to distribute controlled substance analogues; (3) whether the seller had a shared stake in the buyer's resale of the controlled substance analogues; (4) whether the seller controlled the buyer in the conduct of his resale of the controlled substance analogues; (5) the quantity of controlled substance analogues sold; (6) the length of time over which the seller sold controlled substance analogues to the buyer; (7) whether one of the parties advised the other on the conduct of the other's business; (8) whether either had agreed to warn the other of threats to the business from competing dealers or from law-enforcement authorities; and (9) whether there was any understanding between them limiting how either conducted their business. (Docket No. 139 at 9.)

III. *Admissibility of Expert Testimony*

McFadden next argues that the court should not have permitted evidence concerning animal studies. At trial, McFadden moved to exclude testimony from one of the government's experts, Dr. Cassandra Prioleau, on the ground that her opinions were based on animal studies involving controlled substances. After considering the reliability and relevance standards set forth in Rule 702 of the Federal Rules of Evidence[4] and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993),[5] the court

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[4] Rule 702 provides that a witness "who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case." Fed.R.Evid. 702.

[5] In *Daubert*, the Supreme Court announced five factors that the trial court may use in assessing the relevancy and reliability of proffered expert testimony: (1) whether the particular scientific theory "can be (and has been) tested"; (2) whether the theory "has been subjected to peer review and publication"; (3) the technique's "known or potential rate of error"; (4) the "existence and maintenance of standards controlling the technique's operation"; and (5) whether the technique has achieved "general acceptance" in the relevant scientific or "expert community." *Daubert*, 509 U.S. at 593–94. Rather than providing a definitive or exhaustive list, *Daubert* illustrates the types of factors that will "bear on the inquiry." *Id.* at 593. The Supreme Court emphasized that the analysis must be "a flexible one." *Id.* at 594; *see also Kumho Tire Co., Ltd. v.*

denied the motion in open court, finding that there was a sufficient basis for receipt of Dr. Prioleau's opinions.

For the reasons stated on the record, the court remains convinced that Dr. Prioleau's testimony was properly admitted, and that the alleged shortcomings identified by the defendant went to the weight it should be given rather than its admissibility. The animal studies relied upon by Dr. Prioleau were thoroughly challenged on cross-examination and by McFadden's own expert witness, and it was ultimately up to the jury to decide whether her testimony was credible and how much weight to give her opinions. Accordingly, the court concludes that it did not err in admitting Dr. Prioleau's testimony, and that the defendant's motion for judgment of acquittal on this ground must be denied. *See United States v. Moreland,* 437 F.3d 424, 431 (4th Cir. 2006) (emphasizing that "[t]he court need not determine that the proffered expert testimony is irrefutable or certainly correct," since "[a]s with all other admissible evidence, expert testimony is subject to testing by 'vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof' ") (quoting *Daubert,* 509 U.S. at 596).

IV. *The Sufficiency of the Evidence*

Carmichael, 526 U.S. 137, 141–42 (1999) (holding that *Daubert's* factors neither necessarily nor exclusively apply to every expert).

Finally, McFadden challenges the sufficiency of the evidence to support his convictions. Specifically, McFadden argues that the evidence was insufficient to establish that methylone, MDPV, and 4–MEC have actual, intended, or claimed stimulant effects on the central nervous system that are substantially similar to or greater than the stimulant effects on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act. For the following reasons, the court is unable to agree.

When a motion for judgment of acquittal is based on a claim of insufficient evidence, the jury verdict "must be sustained if there is substantial evidence, taking the view most favorable to the Government, to support it." *Glasser v. United States*, 315 U.S. 60, 80 (1942). "Substantial evidence is evidence that a reasonable finder of fact could accept as adequate and sufficient to support a conclusion of a defendant's guilt beyond a reasonable doubt." *United States v. Green*, 599 F.3d 360, 367 (4th Cir. 2010). In determining whether substantial evidence supports the verdict, the court considers both circumstantial and direct evidence, drawing all reasonable inferences from such evidence in the government's favor. *United States v. Harvey*, 532 F.3d 326, 333 (4th Cir. 2008). The court does not reweigh the evidence or reassess the jury's determination of witness credibility, *United States v. Brooks*, 524 F.3d 549, 563 (4th Cir. 2008), and can overturn a conviction on insufficiency grounds "only when the prosecution's failure is clear," *United States v. Moye*, 454 F.3d 390, 394 (4th Cir. 2006) (internal quotation marks omitted).

Applying these principles, the court is convinced that the government presented sufficient evidence to establish actual, intended, or claimed physiological similarity between each of the alleged analogues and a controlled substance. Specifically, the jury heard sufficient evidence to find that methylone, MDPV, and 4–MEC have actual, intended, or claimed stimulant effects on the central nervous system that are substantially similar to or greater than the stimulant effects on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act.

Dr. Prioleau, a drug science specialist employed by the Drug Enforcement Administration, testified as an expert witness for the government on the physiological effects of the alleged analogues. Dr. Prioleau first summarized her evaluation of methylone. Based on her review of drug discrimination studies involving animals, as well as case reports and other scientific literature, Dr. Prioleau opined that methylone would have stimulant effects on the central nervous system that are substantially similar to that of MDMA (ecstasy), a Schedule I controlled substance.

In evaluating the effects of MDPV, Dr. Prioleau reviewed drug discrimination and locomotor studies involving animals, as well as case reports detailing the effects that people experienced when taking MDPV. Additionally, Dr. Prioleau performed a structural activity relationship analysis. Based on the results of that analysis, as well as the reports contained in the existing scientific literature, Dr. Prioleau opined that MDPV would have stimulant

effects on the central nervous system that are substantially similar to those of methcathinone, a Schedule I controlled substance.

With respect to 4–MEC, Dr. Prioleau testified that it was an emerging substance and, thus, that there were not yet any published studies on its pharmacological effects. Consequently, Dr. Prioleau performed a structural activity relationship analysis, which incorporated a review of relevant scientific literature. Based on that analysis, Dr. Prioleau opined that 4–MEC would also have stimulant effects on the central nervous system substantially similar to those of methcathinone.

The court is of the opinion that Dr. Prioleau's testimony, standing alone, was sufficient to allow a reasonable juror to find that methylone has stimulant effects substantially similar to or greater than those of MDMA, and that MDPV and 4–MEC have stimulant effects substantially similar to or greater than those of methcathinone.[6] While McFadden criticizes Dr. Prioleau's testimony on the basis that she relied on "qualitative" analyses, as

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[6] Thus, the court notes that, even if the defendant is correct in arguing that an alleged analogue must be both chemically and physiologically similar to the same controlled substance to meet the requirements of § 802(32)(A), the government's evidence was sufficient in this regard. As summarized above, the government's evidence established that the chemical structure of methylone is substantially similar to that of MDMA, and that MDPV and 4–MEC have chemical structures substantially similar to the chemical structure of methcathinone.

opposed to "quantitative" evaluations of the alleged analogues, McFadden's argument is unsupported by the existing case law applying the Analogue Act. *See, e.g., United States v. Brown*, 415 F.3d 1257, 1267–68, 1272 (11th Cir. 2005) (holding that the visual assessment method used by the governments' experts to assess substantial similarity under § 802(32)(A)(i), while not quantitative or testable by scientific method, was admissible, and that the expert testimony provided a reasonable basis for concluding beyond a reasonable doubt that the chemical structure of the alleged analogue was substantially similar to that of a controlled substance); *United States v. Klecker*, 228 F.Supp.2d 720, 729 (E.D.Va. 2002) (rejecting the defense expert's attempts "to apply the same test for finding a substantially similar stimulant, depressant or hallucinogenic effect under the statute as the medical community requires for the approval of new prescription drugs to be utilized in medical treatment"). Moreover, the fact that McFadden provided his own expert testimony from Dr. Matthew Lee does not undermine the court's conclusion as to the sufficiency of the government's evidence. *See Brown*, 415 F.3d at 1271 ("That a defendant has provided some testimony to support his theory of the case is not enough to show insufficient evidence, because the factfinder is free to reject that testimony.").

In addition to Dr. Prioleau's expert opinions, the government presented testimony from Toby Sykes, who purchased bath salts from Lois McDaniel, and consumed them by mixing the bath salts with water and injecting them into his body. Sykes testified that

he regularly used methamphetamine, a Schedule II controlled substance, from 1987 until 2006, and that the effects of the bath salts he purchased from McDaniel were more potent than those of methamphetamine.[7] While McFadden argues that there were no laboratory certificates confirming what Sykes consumed, there was sufficient evidence for the jury to infer that the substances consumed by Sykes were the same substances that McDaniel purchased from McFadden.

In addition to the foregoing testimony, the government played a recorded telephone call from August 25, 2011, during which McFadden compared one of his bath salt products containing 4–MEC to cocaine. During the same conversation, McFadden referenced MDPV when describing another bath salt product that he compared to crystal methamphetamine. The court agrees with the government that this evidence further supports the jury's findings with regard to physiological similarity under § 802(32)(A).

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[7] Sykes' comparison to methamphetamine was consistent with additional testimony provided by Dr. Prioleau. When asked to describe the actual effects that methylone, MDPV, and 4MEC would have on the central nervous system, Dr. Prioleau testified that the effects would include, among others, decreased appetite, restlessness, and increased blood pressure, heart rate, and body temperature. Dr. Prioleau noted that such effects are common characteristics of stimulants, and, thus, that other stimulants, such as cocaine and methamphetamine, have similar effects.

In sum, the evidence was sufficient to establish, beyond a reasonable doubt, that methylone, MDPV, and 4–MEC have actual, intended, or claimed stimulant effects on the central nervous system that are substantially similar to or greater than those of a controlled substance in Schedule I or II. In the absence of any other meritorious arguments, McFadden's convictions must be sustained.

Conclusion

For the reasons stated, McFadden's motion for judgment of acquittal will be denied. The Clerk is directed to send certified copies of this memorandum opinion to all counsel of record.

ENTER: This 10th day of May, 2013.

/s/ Glen Conrad

Chief United States District Judge

APPENDIX D

FILED: June 17, 2014

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 13-4349
(3:12-cr-00009-GEC-1)

UNITED STATES OF AMERICA
Plaintiff – Appellee

v.

STEPHEN DOMINICK MCFADDEN, a/k/a/ Stephen Domin McFadden
Defendant – Appellant

ORDER

The petition for rehearing en banc was circulated to the full court. No judge requested a poll under Fed. R. App. P. 35. The court denies the petition for rehearing en banc.

For the Court

/s/ Patricia S. Connor, Clerk

No. 14-378

In the Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN, PETITIONER

v.

UNITED STATES OF AMERICA

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

BRIEF FOR THE UNITED STATES IN OPPOSITION

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QUESTION PRESENTED

Whether, in a prosecution under the Controlled Substance Analogue Enforcement Act of 1986, Pub. L. No. 99-570, 100 Stat. 3207-13 (21 U.S.C. 813), the government must prove that the defendant knew, had a strong suspicion, or deliberately avoided knowing that the substance that he was intentionally distributing for human consumption possessed the characteristics of a controlled substance analogue.

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OPINIONS BELOW

The opinion of the court of appeals (Pet. App. 1a-27a) is reported at 753 F.3d 432. The memorandum opinion of the district court (Pet. App. 44a-68a) is reported at 15 F. Supp. 3d 668.

JURISDICTION

The judgment of the court of appeals (Pet. App. 1a) was entered on May 21, 2014. A petition for rehearing was denied on June 17, 2014 (Pet. App. 69a). On August 21, 2014, the Chief Justice extended the time within which to file a petition for a writ of certiorari to and including October 14, 2014, and the petition was filed on October 2, 2014. The jurisdiction of this Court is invoked under 28 U.S.C. 1254(1).

STATEMENT

Following a jury trial in the United States District Court for the Western District of Virginia, petitioner was convicted on one count of conspiring to distribute a substance or mixture containing controlled substance analogues, in violation of 21 U.S.C. 841(b)(1)(C) and 21 U.S.C. 846, and eight counts of distributing a substance or mixture containing a controlled substance analogue, in violation of 21 U.S.C. 841(a)(1) and (b)(1)(C). Pet. App. 28a-32a; see 21 U.S.C. 813, 802(32). He was sentenced to 33 months of imprisonment, to be followed by 30 months of supervised release. Pet. App. 33a-35a. The court of appeals affirmed. *Id.* at 1a-27a.

1. In July 2011, a drug enforcement task force began investigating the use and distribution of substances commonly known as "bath salts" in the Charlottesville, Virginia, area. Pet. App. 5a; Gov't C.A. Br. 3-4. Bath salts are used as recreational drugs and, when ingested, are capable of producing effects similar to those produced by controlled substances, including cocaine, methamphetamine, and methcathinone. Pet. App. 5a; Gov't C.A. Br. 4.

The task force focused on a Charlottesville video rental store, owned and operated by Lois McDaniel, that sold bath salts. Pet. App. 5a; Gov't C.A. Br. 4. Using confidential informants, investigators purchased bath salts from McDaniel twice. *Ibid.* Testing revealed that the bath salts contained 3,4-methylenedioxypyrovalerone (MDPV) and 3,4-methylenedioxymethcathinone (MDMC), also known as methylone. *Ibid.* Additional bath salts later seized from McDaniel's store contained a combination of MDPV,

MDMC, and methylethylcathinone (4-MEC). Pet. App. 5a; Gov't C.A. Br. 4-5.

McDaniel agreed to cooperate with investigators, and she informed them that petitioner had supplied the bath salts she was selling. Pet. App. 5a; Gov't C.A. Br. 4-5. McDaniel agreed to make recorded telephone calls to petitioner to order more bath salts. Pet. App. 5a; Gov't C.A. Br. 6-11.

During the calls, petitioner stated that one of his products was "the replacement for the MDPV." Gov't C.A. Br. 7; explained that another product was a mixture of a straight chemical called "Alpha" and 4-MEC," *id.* at 8; discussed which of his products was the "most powerful" and "intense," *ibid.*; and expressly compared his products to cocaine and methamphetamine, *id.* at 8-11. See Pet. App. 5a-6a. At times, petitioner also sought to avoid explicit discussion about the nature of the substances he was selling. For example, when McDaniel asked petitioner which of his products was an alternative for methamphetamine, petitioner responded, "we don't talk about that, you know that." Gov't C.A. Br. 10-11.

With McDaniel's assistance, investigators purchased bath salts from petitioner on five occasions in 2011 and 2012. Pet. App. 6a; Gov't C.A. Br. 6-7. Testing confirmed that the bath salts contained MDPV, MDMC, and 4-MEC. *Ibid.*

In February 2012, officers arrested petitioner and executed a search warrant at his New York business. Gov't C.A. Br. 11. A number of bath salts were recovered, submitted for laboratory analysis, and determined to contain 4-MEC. *Ibid.* Petitioner's personal computer also was seized and subsequently searched. *Ibid.* E-mails on the computer demonstrated that

petitioner had attempted to disguise the true nature of his business. *Ibid.* For example, in one e-mail to a customer who was searching for bath salts on petitioner's website, petitioner wrote, "look at green valley oils, it's a front for the hardball." *Ibid.* In another e-mail, petitioner told a customer to look for a product "under the Green Valley Oils with the Hardball Aromatherapy. * * * [T]rying to put some shade on it." *Id.* at 11-12.

2. Under the Controlled Substance Analogue Enforcement Act of 1986 (Analogue Act), Pub. L. No. 99-570, 100 Stat. 3207-13, "[a] controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I." 21 U.S.C. 813. Accordingly, it is unlawful "for any person knowingly or intentionally" to distribute a controlled substance analogue for human consumption. 21 U.S.C. 841(a)(1).

The term "controlled substance analogue" is generally defined to mean a substance:

> (i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;
>
> (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or
>
> (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central

> nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. 802(32)(A). The majority of courts to have considered the question have held that the foregoing definition must be read in the conjunctive, *i.e.*, that a substance qualifies as a controlled substance analogue only if it satisfies Subsection (i) and either Subsection (ii) or Subsection (iii). See *United States* v. *Turcotte*, 405 F.3d 515, 521-523 (7th Cir. 2005) (surveying case law), cert. denied, 546 U.S. 1089 (2006). The definition also expressly excludes any controlled substance, any drug approved by the Food and Drug Administration, or the investigational use of a drug. See 21 U.S.C. 802(32)(C).

3. On November 14, 2012, a federal grand jury sitting in the Western District of Virginia returned a superseding indictment charging petitioner with one conspiracy count and eight substantive counts related to his distribution of substances containing the controlled substance analogues MDPV, MDMC, and 4-MEC. Pet. App. 6a; Gov't C.A. Br. 2.

At trial, in addition to other evidence, the government presented the testimony of two expert witnesses: Dr. Thomas DiBerardino, a chemist with the Drug Enforcement Administration (DEA), and Dr. Cassandra Prioleau, a DEA drug science specialist. Pet. App. 7a; Gov't C.A. Br. 13. Dr. DiBerardino testified that MDPV has a chemical structure that is substantially similar to methcathinone, a Schedule I controlled substance, and that phenethylamine is the core chemical structure for both methcathinone and MDPV. Pet. App. 7a; Gov't C.A. Br. 13-14. Dr. DiBerardino also

opined that the chemical structure of 4-MEC (methylethylcathinone) is also substantially similar to the chemical structure of methcathinone, and, again, that both substances are part of the phenethylamine core chemical family and that their minor chemical structural difference is so slight as to make them chemically substantially similar. *Ibid.* Finally, Dr. DiBerardino testified that MDMC is chemically substantially similar to MDMA, also known as ecstasy, a Schedule I controlled substance. Pet. App. 7a; Gov't C.A. Br. 14. Dr. DiBerardino explained that both MDMC and MDMA have phenethylamine as their core chemical structure, and, using chemical structure overlays for both MDMC and MDMA, he described to the jury how the minor chemical structural differences between the two substances are so slight as to make them chemically substantially similar. *Ibid.*

Dr. Prioleau testified to the pharmacological similarity element. Pet. App. 7a; Gov't C.A. Br. 14-15. She testified that 4-MEC and MDPV each produces a stimulant effect on the central nervous system substantially similar to that produced by methcathinone, the controlled substance to which they are chemically similar. Pet. App. 7a-8a; Gov't C.A. Br. 15-16. She also testified that MDMC produces a stimulant effect on the central nervous system substantially similar to that produced by MDMA, the controlled substance to which it is chemically similar. *Ibid.*

The government also introduced the testimony of a former methamphetamine addict, Toby Sykes, who had purchased bath salts from McDaniel. Pet. App. 17a. He testified that the bath salts "produced a far more potent effect on his body than the use of methamphetamine." *Ibid.*

The district court instructed the jury, among other things, that the government had to prove the following elements beyond a reasonable doubt:

> First, that the defendant knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act;
>
> Second[,] that the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act[;] [a]nd,
>
> Third[,] that the defendant intended for the mixture or substance to be consumed by humans.

Gov't C.A. Br. 59-60 (brackets in original); see Pet. App. 56a. The court denied petitioner's request for an instruction stating that the government had to prove that he knew, had a strong suspicion, or deliberately avoided knowing "that the substances that he was distributing possessed the characteristics of controlled substance analogues." Gov't C.A. Br. 57-58.

4. The jury found petitioner guilty of each of the nine counts alleged in the indictment. Pet. App. 9a, 29a-32a; Gov't C.A. Br. 3. In denying petitioner's subsequent motion for a judgment of acquittal, Pet. App. 44a-68a, the district court rejected petitioner's claim that the jury instructions were erroneous, *id.* at 54a-60a. The court stated that petitioner's re-

quested scienter instruction to find a violation of the Analogue Act was "not required by the statute or Fourth Circuit precedent." *Id.* at 58a (citing *United States* v. *Klecker*, 348 F.3d 69, 71-72 (2003), cert. denied, 541 U.S. 981 (2004)).

The district court sentenced petitioner to 33 months of imprisonment, to be followed by 30 months of supervised release. Pet. App. 33a-35a.

5. The court of appeals affirmed. Pet. App. 1a-27a. The court of appeals held that the district court did not abuse its discretion in declining to instruct the jury that the government was required to prove under the Analogue Act that petitioner "knew, had a strong suspicion, or deliberately avoided knowledge that the alleged [controlled substance analogues] possessed the characteristics of controlled substance analogues." *Id.* at 21a-22a. In order to show an abuse of discretion, the court noted, the defendant must show, among other things, that the proposed instruction "was correct." *Ibid.* (quoting *United States* v. *Bartko*, 728 F.3d 327, 343 (4th Cir. 2013), cert. denied, 134 S. Ct. 1043 (2014)). The court held that petitioner's proposed instruction failed because it was incorrect. *Ibid.*

The court of appeals observed that, under *Klecker*, the government must prove that the defendant intended that the substance at issue be consumed by humans, but need not prove that the defendant knew the substance was a controlled substance analogue. Pet. App. 21a-22a (citing *Klecker*, 348 F.3d at 71-72). *Klecker* held:

> In order to show an Analogue Act violation, the Government must prove (1) substantial *chemical* similarity between the alleged analogue and a controlled substance, *see* 21 U.S.C.A. § 802(32)(A)(i);

> (2) actual, intended, or claimed *physiological* similarity (in other words, that the alleged analogue has effects similar to those of a controlled substance or that the defendant intended or represented that the substance would have such effects), *see id.* § 802(32)(A)(ii), (iii); and (3) *intent* that the substance be consumed by humans, *see id.* § 813.

348 F.3d at 71.

The court of appeals noted that the Seventh Circuit had stated in *Turcotte* that the government must prove "that the defendant knew the substance in question was a controlled substance analogue." Pet. App. 21a-22a (quoting *Turcotte*, 405 F.3d at 527). But, the court explained, the Fourth Circuit had "not imposed such a knowledge requirement." *Ibid.* Moreover, the court stated, it had "not included the concepts of 'strong suspicion' or 'deliberate avoidance' in framing the scienter requirement under the Act." *Ibid.* Accordingly, the court held that the district court had not abused its discretion in denying petitioner's proposed instruction. *Ibid.*[1]

ARGUMENT

Petitioner asserts (Pet. 12-25) that this Court's review is warranted because the courts of appeals disagree about whether, in an Analogue Act prosecution, the government must prove that the defendant knew, strongly suspected, or deliberately avoided knowing

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[1] The court of appeals also rejected petitioner's claims that the Analogue Act is unconstitutionally vague as applied to him, Pet. App. 9a-16a; that the district court committed evidentiary errors, *id.* at 16a-20a; and that the evidence was insufficient to support his convictions, *id.* at 22a-26a. Petitioner does not renew those claims in this Court.

that the substance he distributed for human consumption possessed the characteristics of a controlled substance analogue. Although some disagreement exists in the courts of appeals over the knowledge requirement in Analogue Act prosecutions, petitioner overstates the breadth and depth of the disagreement. Only the Fourth and Seventh Circuits have squarely addressed the question, and the difference between the rules articulated in those two circuits is less stark than petitioner suggests. Certiorari at this time thus would be premature, as further percolation in the lower courts would benefit this Court. This case also does not present a suitable vehicle for resolving any conflict. No circuit has squarely embraced the particular formulation petitioner proposed below, and any instructional error was harmless in light of the extensive evidence of petitioner's knowledge that the substances he was distributing had the characteristics of controlled substance analogues.

1. The court of appeals correctly held that the district court did not abuse its discretion in rejecting petitioner's proposed jury instruction.

a. As with any statutory question, an analysis of the Act's mental state requirements "begin[s] by examining the text." *Carter* v. *United States*, 530 U.S. 255, 271 (2000). Here, Congress included three express mental-state requirements in the provisions that define an Analogue Act violation. First, the defendant must distribute the substance "knowingly or intentionally," 21 U.S.C. 841(a)(1). Second, he must "inten[d]" that it be used "for human consumption," 21 U.S.C. 813. And, third, to satisfy the "representation" prong of the definition of a "controlled substance analogue," he must "represen[t] or inten[d]" that it

has "a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II," 21 U.S.C. 802(32)(A)(iii). See *United States* v. *Desurra*, 865 F.2d 651, 653 (5th Cir. 1989) (per curiam); *United States* v. *Klecker*, 348 F.3d 69, 71 (4th Cir. 2003).

While the "representation" prong of the definition of a controlled substance analogue contains a mental state requirement (see 21 U.S.C. 802(32)(A)(iii)), the other two prongs of the definition—requiring a chemical structure similar to a scheduled controlled substance and a substantially similar effect on the central nervous system (21 U.S.C. 802(32)(A)(i) and (ii))—contain no express mental-state element. The statute provides that those two prongs are satisfied when, respectively, a substance has a "chemical structure" that "is substantially similar to the chemical structure of a controlled substance," and the substance "has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance." 21 U.S.C. 802(32)(A)(i) and (ii). The juxtaposition of express mental-state elements in several places in the Analogue Act—including the third prong of the definition—suggests that the omission of a mental-state requirement in the first two prongs of the definition was intentional. "Where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intention-

ally and purposely in the disparate inclusion or exclusion." *Bates* v. *United States*, 522 U.S. 23, 29-30 (1997); see *Russello* v. *United States*, 464 U.S. 6, 23 (1983).[2]

b. Petitioner argues (Pet. 19-20) that the Analogue Act adds analogues to the substances criminalized under the Controlled Substances Act (CSA) Pub. L. No. 91-513, 84 Stat. 1242 (21 U.S.C. 801 *et seq.*), and thus the mens rea requirement under 21 U.S.C. 841(a)—that a defendant know that he possesses a controlled substance—applies to the Analogue Act, such that a defendant must know that the substance he possesses has the characteristics of a controlled substance. But as noted above, the text weighs against that reading. And as the Seventh Circuit explained in *United States* v. *Turcotte*, 405 F.3d 515 (2005), cert. denied, 546 U.S. 1089 (2006), "applying the standard requirement that a defendant must know the substance in question is a 'controlled substance' is nonsensical since controlled substance analogues are, by definition, not 'controlled substances'—their distribution is criminalized, despite their omission from

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[2] The legislative history on point is limited. The Senate Report states that "the offender must have known or intended that he was manufacturing, distributing, or possessing a substance that he knew or intended to have the characteristics of a controlled substance analogue." S. Rep. No. 196, 99th Cong., 1st Sess. 4 (1985). But the Senate had adopted a simpler two-pronged definition of "controlled substance analogue." *Id.* at 6, 9. The House rejected the Senate's proposal and instead adopted the three-pronged definition that, with modifications not relevant here, became law. See H.R. Rep. No. 848, 99th Cong., 2d Sess. 6 (1986). When describing the operation of its three-part definition, the House Report does not mention or suggest that the defendant must have known about the substance's chemistry or drug effects. See *ibid.*

the government's controlled substances schedules, because they have similar chemical structures and either actually or purportedly similar physiological effects to controlled substances." *Id.* at 526. Whether a substance is an analogue is thus not a question of law but a question of fact for the jury. *Id.* at 526-527. Accordingly, "[d]irect and literal application of the scienter requirement applicable to § 841(a) * * * would threaten to eviscerate the Analogue Provisions of § 802(32)(A) at one stroke." *Id.* at 527.

Petitioner argues (Pet. 20-22) that this Court should draw an analogy to *Staples* v. *United States*, 511 U.S. 600 (1994), and require proof of knowledge that the substance had the "characteristics" that bring it within the statutory definition of a controlled substance analogue. But *Staples* is inapposite because it involved a criminal statute with no express mens rea requirement, see *id.* at 605, and the Court's "narrow" holding was simply that Congress did not intend it to be a rare strict-liability criminal offense, *id.* at 619. By contrast, courts need not add implied mental-state requirements to the Analogue Act to avoid making it a strict-liability statute. The Analogue Act already contains express mental-state requirements. The instruction below thus required the jury to find (1) that petitioner "knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed" drug effect that is "substantially similar to or greater than" a controlled substance's drug effect; and (2) that he intended it for human consumption. Gov't C.A. Br. 59-60; Pet. App. 56a.

Petitioner's proposed instruction would also undermine Congress's core purpose in enacting the Analogue Act. "Congress enacted the Analogue Act to

prevent underground chemists from altering illegal drugs in order to create new drugs that are similar to their precursors in effect but are not subject to the restrictions imposed on controlled substances." *Klecker*, 348 F.3d at 70; see *United States* v. *Hodge*, 321 F.3d 429, 437 (3d Cir. 2003) ("The Analogue Act's purpose is to make illegal the production of designer drugs and other chemical variants of listed controlled substances that otherwise would escape the reach of the drug laws."); *Turcotte*, 405 F.3d at 523 (similar). The legislative history repeatedly references the "clandestine chemists" and distributors of designer drugs who are at the heart of the problem. See, *e.g.*, S. Rep. No. 196, 99th Cong., 1st Sess. 1, 3, 6 (1985) (Senate Report); H.R. Rep. No. 848, 99th Cong., 2d Sess. 2, 5 (1986) (House Report). The legislative history also emphasizes the need for "swift investigation and prosecution" of such distributors of designer drugs. House Report 2; see Senate Report 3 ("Strong measures are needed to attack this problem.").

Petitioner's proposed instruction, however, could impede prosecution of street-level dealers and others in the designer drug distribution chain. See *Turcotte*, 405 F.3d at 527 (such a requirement "may impose a significant prosecutorial burden in some cases"). Petitioner would have the government prove in all Analogue Act prosecutions that the defendant "knew, had a strong suspicion, or deliberately avoided know-[ing]," among other things, that the substance's chemical structure was substantially similar to that of a controlled substance. Pet. 9; see Gov't C.A. Br. 57-58; 21 U.S.C. 802(32)(A)(i). But it is "particularly nettlesome" and may be "extremely difficult to *prove*" in some cases that a defendant had knowledge of these

"intricacies of chemical science." *Turcotte*, 405 F.3d at 527.

To make matters worse, savvy distributors could protect their distribution networks by lying to those beneath them in the distribution chain and telling them that an analogue was "completely new," with effects that are similar to but "even better" than the controlled substance from which it was derived. And with less ability to investigate, prosecute, and convict dealers at the bottom and middle of the distribution chain, the government may have less ability to gain leverage and knowledge needed to prosecute and convict distributors at the top. Petitioner's proposed rule thus may undermine Congress's core purpose of preventing distributors of designer drugs from remaining one step ahead of law enforcement.

Petitioner appears to suggest (Pet. 22-25) that his proposed instruction should be adopted to avoid a "vagueness difficulty." But petitioner does not present a claim that the statute is unconstitutionally vague as applied to him, see Pet. i, and "[t]he circuit courts considering this issue have unanimously held that the CSA's Analogue Provision is not unconstitutionally vague." *Turcotte*, 405 F.3d at 531; see *United States* v. *Bamberg*, 478 F.3d 934, 937-938 (8th Cir. 2007), cert. denied, 552 U.S. 1261 (2008); *United States* v. *Roberts*, 363 F.3d 118, 122-126 (2d Cir. 2004); *Klecker*, 348 F.3d at 71-72; *Desurra*, 865 F.2d at 653. Notably, the Seventh Circuit held that, "even leaving aside the implications of our scienter ruling, the Analogue Provision seems to us sufficiently clear by its own terms." *Turcotte*, 405 F.3d at 531.

Petitioner's arguments about vagueness also illustrate why his proposed instruction is unworkable. As

petitioner observes (Pet. 23), "a substance's chemical structure [is] a fact (unlike the mechanics of a firearm) that cannot easily be determined without the use of sophisticated equipment and analysis." He adds (Pet. 24) that "even if ordinary citizens could be expected to be able to discover the chemical structure of alleged analogue substances, they would still be left to guess whether the inevitable combination of similarities and dissimilarities render the substance 'substantially similar' to a controlled substance in the minds of a jury faced with competing expert testimony." But the ability of defendants to make similar arguments to a jury under petitioner's proposed instruction is precisely why his proposed instruction would be a barrier to effective enforcement of the Analogue Act.

As this case illustrates, a person who sells "bath salts" for use as recreational drugs, compares them to controlled substances, and modifies his wares slightly to remain one step ahead of the DEA's efforts to list new controlled substances, should not be heard to complain that he is innocent simply because he did not know whether a jury would find his bath salts to meet the statutory definition of an analogue. Indeed, petitioner's position comes close to sanctioning a mistake-of-law defense in Analogue Act cases. "The general rule that ignorance of the law or a mistake of law is no defense to criminal prosecution is deeply rooted in the American legal system." *Cheek* v. *United States*, 498 U.S. 192, 199 (1991). Knowledge of the particular chemical relationship between a new drug and a controlled substance is "so closely related to knowledge" of the Analogue Act "that requiring the Government to prove the former would in effect require it to prove

knowledge of the law." *Staples*, 511 U.S. at 622 n.3 (Ginsburg, J., concurring in the judgment).

2. Petitioner correctly observes that the circuits are divided over the application of the mens rea requirement in Analogue Act prosecutions, but he overstates the extent of disagreement in the circuits over this issue. Petitioner contends (Pet. 14-15) that there is a 3-2 split, with the Second, Seventh, and Eighth Circuits holding "that the defendant must know that the substance in question is a controlled substance analogue," while the Fourth and Fifth Circuits hold that such knowledge is not required. Although petitioner is correct that the Seventh Circuit has analyzed this issue in *Turcotte* and articulated a rule that differs from the Fourth Circuit's rule applied below, the Second and Eighth circuits have not addressed the issue squarely. Petitioner also overstates the practical difference between the rule articulated in *Turcotte* and the rule applied below. Crucially, the Seventh Circuit declined to endorse a rule similar to the instruction petitioner proposed below because it could pose a practical barrier to prosecution.

a. In *Turcotte*, a jury had convicted the defendant under the Analogue Act for knowingly and intentionally possessing the substance gamma butyrolacetone (GBL) with intent to distribute. 405 F.3d at 520, 523-524. The jurors had been instructed that they "could convict [the defendant] even if they did not find that he knew GBL was a 'controlled substance.'" *Id.* at 520. On appeal, the Seventh Circuit stated that this instruction was incorrect. The Seventh Circuit noted that the Analogue Act "imposes criminal liability through the more general provisions of the CSA, 18 U.S.C. § 841(a), which implicate a well-established

scienter requirement." *Id.* at 525. Specifically, "defendants must know that the substance in question is a controlled substance." *Ibid.* "[K]nowledge of the specific substance involved will usually automatically imply knowledge that the substance is controlled," and knowledge is also satisfied when the defendant "is at least aware that it is a controlled substance" even if he "does not know its specific identity." *Id.* at 525-526.

But, the court of appeals explained, "the exact contours" of Section 841's scienter requirement "are not obvious in the context" of the Analogue Act. *Turcotte*, 405 F.3d at 526. "[A]pplying the standard requirement that a defendant must know the substance in question is a 'controlled substance' is nonsensical." *Ibid.* Analogues "are, by definition, not 'controlled substances'—their distribution is criminalized, despite their omission from the government's controlled substances schedules, because they have similar chemical structures and either actually or purportedly similar physiological effects to controlled substances." *Ibid.* A defendant thus cannot know "conclusively *ex ante*" whether a substance is an analogue; it is a fact that the jury must find at trial (applying the three clauses of [Section 802(32)(A)])." *Id.* at 526-527. "Direct and literal application of the scienter requirement applicable to § 841(a), in other words, would threaten to eviscerate the Analogue Provisions of § 802(32)(A) at one stroke." *Id.* at 527. By contrast, in the Seventh Circuit's view, "[d]iscarding the scienter requirement would essentially mean that individuals deal in narcotics substitutes at their own risk, removing a primary *mens rea* element of possession and distribution offenses." *Ibid.*; (without an additional scienter re-

quirement, the Analogue Act could "ensnare individuals engaged in apparently innocent conduct" and would be "more vulnerable to vagueness challenges" (citation omitted)).

In light of these considerations, the Seventh Circuit "fe[lt] that [its] precedents demand[ed] a showing that the defendant knew the substance in question was a controlled substance analogue. That is, the defendant must know that the substance at issue meets the definition of a controlled substance analogue set forth in § 802(32)(A)." *Turcotte*, 405 F.3d at 527. Specifically, the defendant "must know that the substance at issue has a chemical structure substantially similar to that of a controlled substance, and he or she must either know that it has similar physiological effects or intend or represent that it has such effects." *Ibid.*

The Seventh Circuit recognized, however, that "requiring the government to prove scienter as to these criteria may impose a significant prosecutorial burden in some cases." *Turcotte*, 405 F.3d at 527. "The question of similar chemical structure is particularly nettlesome since, even if such chemical similarities exist, and even if the defendant is aware of these similarities, the intricacies of chemical science may render it extremely difficult to *prove* that a defendant had such knowledge." *Ibid.* The Seventh Circuit crafted a "provisional remedy" for the "problem" its reading of the statute created: "[W]e prescribe that * * * if the scienter requirement is met with regard to the second part of the analogue definition (knowledge or representation of similar physiological effects), the jury is permitted—but not required—to infer that the

defendant also had knowledge of the relevant chemical similarities." *Ibid.*[3]

This inference considerably narrows the difference between *Turcotte* and the decision below. Pursuant to this inference, the kind of evidence that will often be available in Analogue Act prosecutions (such as evidence that the defendant intended that the product would be used as a drug and knew or claimed that it had drug effects equivalent or greater to those of a controlled substance) can permit a jury to find a defendant guilty, notwithstanding the absence of direct evidence that he knew the substance's chemical structure, the structure of a controlled substance, and the relationship between the two. *Turcotte* therefore will not necessarily lead to different outcomes in the Fourth and Seventh Circuits.

Petitioner's proposed instruction, however, did not expressly provide for such an inference. This stands in contrast to instructions adopted by courts that have followed *Turcotte*. For example, in *United States* v. *Gross*, No. 13-cr-268, 2014 WL 6483307 (S.D. Ala. Nov. 20, 2014), a district court adopted the *Turcotte* formulation, including that inferential proof could satisfy the first prong. "[A] likely reason for believing, intending or representing that a substance has physiological effects substantially similar to those of a controlled substance is an understanding that the

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[3] *Turcotte* ultimately held that the instructional error had been harmless. 405 F.3d at 529. In particular, the defendant was "on notice" that the drug he was selling, GBL, "qualifies as a controlled substance analogue" because "Congress has specifically identified GBL as an analogue" of the controlled substance gamma hydroxybutyric acid (GHB). *Ibid.*

substance has a chemical structure substantially similar to the controlled substance." *Id.* at *5.

b. Petitioner asserts that the Second and Eighth Circuits disagree with the rule the Fourth Circuit applied below. See Pet. 14-15 (citing *United States* v. *Roberts*, 363 F.3d 118, 123 n.1 (2d Cir. 2004); *United States* v. *Sullivan*, 714 F.3d 1104, 1107 (8th Cir. 2013)). But *Roberts* and *Sullivan* do not address the issue squarely.

This passage in *Roberts* that addresses the mens rea requirement in Analogue Act cases is dictum because the mens rea requirement was not in dispute and the court's holding did not depend on it. The only issue on appeal in *Roberts* was whether the phrase "substantially similar [in] chemical structure" in Section 802(32)(A)(i) was unconstitutionally vague as applied to the chemical 1,4-butanediol. 363 F.3d at 119, 123. The Second Circuit held that it was not. The court explained that the defendants "could have readily ascertained" it was an analogue based on evidence that DEA regulations described 1,4-butanediol as an analogue of gamma hydroxybutyric acid (GHB), a controlled substance; two-dimensional diagrams showed there was only a two-atom difference between it and GHB; and 1,4-butanediol is metabolized into GHB. *Id.* at 123-127.

Without the benefit of briefing from either party, the court stated in a footnote in the background section of its opinion that the Analogue Act requires proof that the defendants had "knowledge that they were in possession of a controlled substance." *Roberts*, 363 F.3d at 123 n.1 (citing 21 U.S.C. 841(a)); see Appellant Br., Appellee Br., and Reply Br. in *Roberts*, *supra* (No. 02-1604). Citing a non-Analogue Act case,

the court added that the defendants "need not know the exact nature of the drug; it is sufficient that they be aware that they possessed 'some controlled substance.'" *Roberts*, 363 F.3d at 123 n.1 (quoting *United States* v. *Morales*, 577 F.2d 769, 773 (2d Cir. 1978)).

As the placement of this passage suggests, it is dictum. Notably, in holding that the defendants had adequate notice that the chemical structures of 1,4-butanediol and GHB are substantially similar, the court of appeals relied on evidence showing that the two chemicals are, in fact, structurally similar—and the court did not cite record evidence that the defendants actually *knew* of that structural similarity. *Roberts*, 363 F.3d at 123-126. In any event, *Roberts*'s dictum relying on Section 841(a)'s knowledge requirement is unsound and unlikely to be followed when the issue is squarely presented. As the Seventh Circuit has explained "applying the standard requirement that a defendant must know the substance in question is a 'controlled substance' is nonsensical since controlled substance analogues are, by definition, not 'controlled substances.'" *Turcotte*, 405 F.3d at 526. For that reason, the court in *Turcotte* distinguished *Roberts* rather than citing it with approval. *Ibid.*

Sullivan also does not squarely address the mens rea issue. *Sullivan* involved a sufficiency-of-the-evidence challenge to a conviction under the Analogue Act for selling bath salts containing mephedrone, an analogue of methcathinone. 714 F.3d at 1106-1107. Although the court stated that the elements of the offense include that the defendant must "kn[o]w he was in possession of a controlled substance analogue," *id.* at 1107, the court did not analyze the scienter

requirement or cite *Turcotte* or any other case addressing the issue. Furthermore, *Sullivan* does not suggest that, to satisfy the knowledge requirement, the defendant must know or suspect that the substance possessed the "characteristics" of an analogue, such as a "substantially similar" chemical structure: it affirmed the conviction without pointing to any record evidence of the defendant's knowledge of drug chemistry. Rather, the Eighth Circuit found the knowledge requirement satisfied based on the defendant's statements indicating that he knew "the bath powder was illegal." *Ibid.* That is, *Sullivan* affirmed based on evidence that the defendant knew that the substance he possessed was illegal. The court did not require evidence that the defendant knew or suspected the relationship between the chemical structure of the substance he possessed and that of a controlled substance—the requirement that petitioner would impose here.

In sum, the disagreement among the courts of appeals is not as developed or "stark" (Pet. 17) as petitioner contends. Only the Fourth and Seventh Circuits have squarely addressed the point, and *Turcotte*'s allowance for inferential proof of the chemical-structure prong significantly reduces the practical difference between the two rules. It would therefore be premature for this Court to intervene.

3. This case is also not a suitable vehicle for resolving the disagreement on the mental state required under the Analogue Act. First, as shown above, no circuit has squarely adopted the particular formulation petitioner advanced below. In particular, petitioner's proposed instruction did not provide for the inference *Turcotte* articulated and that other district

courts following *Turcotte* have applied. Second, petitioner's conviction would likely have been affirmed on harmless-error grounds in any circuit that has addressed the knowledge issue. See *Neder* v. *United States*, 527 U.S. 1 (1999) (omission of an element from a jury instruction is subject to harmless-error analysis). In particular, the evidence presented to the jury established beyond a reasonable doubt that petitioner knew or strongly suspected that he was dealing with controlled substance analogues. See, *e.g.*, *United States* v. *Mack*, 729 F.3d 594, 608 (6th Cir. 2013) (jury instruction error is harmless when it is clear beyond a reasonable doubt that the outcome would not change had the jury been properly instructed), cert. denied, 134 S. Ct. 1338 (2014); see also *Turcotte*, 405 F.3d at 529 (affirming Analogue Act conviction on harmless error grounds).

Petitioner knowingly sold "bath salts" containing MDPV, MDMC, and 4-MEC to be used as substitutes for controlled substances. Pet. App. 5a-6a.[4] Petitioner's bath salts were "white powder," "off-white powder," and "beige crystalline powder," which petitioner sold in plastic "baggies," plastic vials, and "blue jeweler's bag[s]." C.A. App. 132, 137-139, 151, 158, 340, 643. The prices petitioner set for his products (and the prices users paid) further suggest his knowledge of illegality: He sold them to McDaniel for $15 per gram (approximately $425 per ounce), and she sold them to her customers for $30 to $70 per gram ($850 to $1984 per ounce). Gov't C.A. Br. 6. The names

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[4] During the course of the government's investigation, the DEA classified MDPV and methylone as controlled substances. See Pet. App. 6a n.2. The government did not charge petitioner with distributing either product after this classification. *Ibid.*

petitioner gave his products further indicate that he knew both that they had drug effects and that they were either controlled substances or closely related to controlled substances: Speed, No Speed, The New Up, Alpha, Sheen's Winning, and Hardball. *Ibid.*

On the telephone calls with McDaniel and investigators, petitioner stated that one of his products was "the replacement for the MDPV"—which petitioner had previously sold but had been recently listed as a controlled substance. Gov't C.A. Br. 7. Petitioner explained that another product was a straight chemical called "Alpha" mixed with 4-MEC. *Id.* at 8. He discussed which of his products was the "most powerful" and "intense." *Ibid.* Petitioner told McDaniel that the mixture of Alpha and 4-MEC was "like cocaine"; that "No Speed Limit" was like crystal meth; and that the "new Sheens" was "more like the meth" or "synthetic meth" than like synthetic cocaine. *Id.* at 8-10; see *id.* at 9-10 (petitioner describing the "new Sheens" as giving "a harder hit to a shorter period of time"); Pet. App. 5a-6a. A former methamphetamine addict who had purchased bath salts from McDaniel testified that they "produced a far more potent effect on his body than his use of methamphetamine." Pet. App. 17a.

The record evidence also showed that petitioner attempted to conceal his activities, further suggesting that he was conscious of his own wrongdoing. For example, when asked which of his products was an alternative for methamphetamine, petitioner responded, "we don't talk about that, you know that." Gov't C.A. Br. 10-11.[5] Petitioner also attempted to disguise

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[5] Petitioner went on, however, to state that "the closest thing you have to that as an alternative is Hardball." C.A. App. 744.

the true nature of his business, telling a buyer searching for bath salts on his website to "look at green valley oils" and describing it as "a front for the hardball." *Id.* at 11; see *id.* at 12 (telling a customer to look for a product "under the Green Valley Oils with the Hardball Aromatherapy. * * * [T]rying to put some shade on it."). And petitioner advised McDaniel about which of his bath salts should be snorted or smoked, again speaking obliquely. See C.A. App. 741-742 ("[S]ome people like to put it directly on a burner and then it smokes. You know, you smoke," but for other substances "some people like to use it just as an aromatherapy to, you know, to smell it. * * * You know what I mean? * * * [I]t depends on usage which chemical I would send you.").

Petitioner emphasizes that he checked the DEA's website to see whether any of the substances he sold were listed as a controlled substance and that he did not sell any substance after it was listed. See Pet. 7. But that is not a sign of innocence of an Analogue Act violation; rather, it indicates that he knew that the products he sold were similar to controlled substances, had drug effects that could warrant them being controlled, and strongly suspected they might already be illegal. If he had been unaware or unsuspecting that the products he sold had the characteristics of controlled substance analogues, he would never have checked the DEA's website to see whether they were already controlled. Cf. *Sullivan*, 714 F.3d at 1107 (that petitioner "indicat[ed] the bath powder was illegal supports a reasonable inference he knew the powder contained a controlled substance analogue"). Furthermore, when one of the drugs he sold was added to Schedule I (MDPV), petitioner did not respond

by ceasing his operations and getting out of the business of selling "bath salts" for use as recreational drugs. Instead, he began selling a "replacement for MDPV." Gov't C.A. Br. 7.

These facts together make it clear beyond a reasonable doubt that any jury would have found that petitioner knew he was dealing with controlled substance analogues. See *Turcotte*, 405 F.3d at 529 n.7 (where defendant intended or represented that substance had similar physiological effects to a controlled substance, "as a matter of common sense, it would seem strange to allow [defendant] to claim he did not know" the substance was an analogue of the controlled substance); cf. *Sullivan*, 714 F.3d at 1107 (that petitioner "indicat[ed] the bath powder was illegal supports a reasonable inference he knew the powder contained a controlled substance analogue").

Accordingly, even without petitioner's preferred jury instruction, his convictions would likely have been affirmed in the Seventh Circuit. As such, this case does not present a suitable vehicle for resolving any disagreement among the courts of appeals.

CONCLUSION

The petition for a writ of certiorari should be denied.

Respectfully submitted.

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No. 14-378

IN THE

Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN,

Petitioner,

v.

UNITED STATES OF AMERICA,

Respondent.

On Petition for a Writ of Certiorari
to the United States Court of Appeals
for the Fourth Circuit

REPLY BRIEF FOR THE PETITIONER

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REPLY BRIEF FOR THE PETITIONER

The Government acknowledges that the petition presents a question that has divided the circuits. It further does not dispute that the proper construction of the Analogue Act's state of mind requirement is an issue of recurring importance. Indeed, the Government admits that the nature of the mens rea requirement has a critical effect on prosecutions under what it concedes is a statute whose application to any given substance can be determined only by holding jury trial. *See* BIO 15-16. The Government nonetheless opposes certiorari because, it says, the circuit split could be bigger, the decision below is correct, and this case presents a poor vehicle for resolving the conflict. None of those arguments has merit.

I. The Circuits Are Intractably Divided.

1. Numerous courts, and indeed the United States itself, have acknowledged that the circuits are broadly divided over the Analogue Act's state of mind requirement. *See, e.g.*, *United States v. Gross*, No. 13-0268-WS, 2014 WL 6483307, at *4 (S.D. Ala. Nov. 20, 2014) (addressing Act's mens rea element and explaining that the "government properly points out that three appellate courts have reached conclusions opposite those of the Fourth and Fifth Circuits," citing cases from the Second, Seventh, and Eighth Circuits); *United States v. Ramos*, No. 13-CR-2034-LLR, 2014 WL 4437554, at *6 (N.D. Iowa Sep. 9, 2014) (acknowledging conflict between Fourth and Eighth Circuits); *United States v. Makkar*, No. 13-CR-0205-CVE, 2014 WL 1572394, at * 1 (N.D. Okl. Apr. 19, 2014) (discussing conflicting decisions of

Second, Fourth, and Seventh Circuits). The Government's newfound skepticism of the extent of the conflict is unsupported.

Seventh Circuit. The United States admits that the Fourth and Seventh Circuits have reached diametrically opposite conclusions about whether the Government must prove that a defendant knew that the substance he sold was a controlled substance analogue. BIO 19. It nonetheless attempts to diminish the "practical difference" between these two rules, *id.* 17, by pointing to the Seventh Circuit's adoption of a permissive inference under which proof that the defendant knew or represented that a substance had a substantially similar physiological effect to a controlled substance permits a jury to infer that he also knew of the substances' similar chemical structure. *Id.* 19-20. But the Seventh Circuit took pains to emphasize that even when that rule applies, the inference is "permitted – but *not required*." *United States v. Turcotte*, 405 F.3d 515, 527 (7th Cir. 2005) (emphasis added). Accordingly, the "jury is always free to accept or reject any such permissible inference, and it remains the government's burden to prove all the elements of the offense beyond a reasonable doubt." *Id.* at 527 n.4. The Seventh Circuit explained that rejecting the inference often will be perfectly reasonable, as a defendant "could represent to others (earnestly or not) that a substance has physiological effects similar to a controlled substance despite being totally ignorant of its actual chemical properties." *Id.* at 528. Such a claim is particularly plausible, the Government all but acknowledges, when defendants are simply

"street-level dealers" uninvolved in the development of the alleged analogue. BIO 14.

In contrast, in the Fourth Circuit, the jury need not find that the defendant even knew of the similarities in *effect* between his substance and a controlled substance, much less that the Government proved (directly or inferentially) that he was aware of the similarities in chemical structure. Pet. App. 21a.

The predictable difference in outcome under these competing rules is no doubt why the Government is zealously defending the Fourth Circuit's rejection of any meaningful mens rea element rather than asking the Court to adopt the Seventh Circuit's position.

In any event, the Government does not claim that the Second or Eighth Circuits have adopted the *Turcotte* inference. Instead, it asserts that neither circuit has "squarely" addressed the question presented. BIO 21. But that is wrong as well.

Eighth Circuit. The Government acknowledges that in *United States v. Sullivan*, 714 F.3d 1104 (8th Cir. 2013), the Eighth Circuit forthrightly held that "the defendant must 'kn[o]w he was in possession of a controlled substance analogue.'" BIO 22 (quoting 714 F.3d at 1107). The Government cannot, and does not, claim this was dicta – the Eighth Circuit was addressing a defendant's claim that the evidence was insufficient to establish his mens rea, which necessarily required the court to decide what state of mind the statute required. *See* 714 F.3d at 1107.

The Solicitor General nevertheless insists that the court did not mean what it said, because in applying its rule, the Eighth Circuit did not "point[]

to any record evidence of the defendant's knowledge of drug chemistry," instead relying on facts "indicating that he knew 'the bath powder was illegal.'" BIO 23 (quoting 714 F.3d at 1107). But there is nothing inherently contradictory in that – the Government's own brief extols the virtues of the Seventh Circuit's permissible inference that likewise allows a jury to find that a defendant knew of the chemical structure of a substance without direct "evidence of the defendant's knowledge of drug chemistry." BIO 23.

In any event, courts in the Eighth Circuit – as well as Government attorneys litigating in that forum – take *Sullivan* at its word when it says that the Analogue Act requires the jury to find that the defendant knew he was selling a controlled substance analogue. *See, e.g., United States v. Browning*, No. 6:12-CR-03105-MDH-1, 2014 WL 4996400, at *2 (W.D. Mo. Oct. 7, 2014) (citing *Sullivan* as establishing the Government's "burden to show that (1) the substances charged in the indictment are controlled substance analogues, and (2) Defendant knew the substances at issue were controlled substance analogues"); United States' Response to Defendant's Motions to Dismiss 5, *Browning, supra*, Docket No. 69 (same); *United States v. Franklin*, Nos. 12-03085-01/10-CR-S-MDH, 2014 WL 1953077, at *7 (W.D. Mo. May 15, 2014) ("[T]he Eighth Circuit has adopted the Seventh Circuit's requirement . . . that the defendant must have known that the substance(s) at issue was a controlled substance analogue.") (citing *Sulivan*, 714 F.3d at 1107); United

States' Response to Defendants' Motions to Dismiss 13, *Franklin*, *supra*, Docket No. 166 (same).[1]

Moreover, even if the Government were right that *Sullivan* requires only proof that the defendant knew that his substances were illegal, that would only show that the circuits have split three ways instead of two – the Government does not claim that any other circuit requires proof of knowledge of unlawfulness, and none does.

Second Circuit. The Government argues that the Second Circuit's listing of the elements of an analogue offense in *United States v. Roberts*, 363 F.3d 118 (2d Cir. 2004), was dicta because it addressed the question in the course of rejecting a vagueness challenge. BIO 21-22. But the Second Circuit's understanding of the statute's mens rea element was necessary to its conclusion that "the defendants' vagueness challenge must be met with some measure of skepticism" because the Act "contains a scienter requirement." 363 F.3d at 123.

Accordingly, the Government recently argued to the Second Circuit that a jury instruction requiring that an analogue defendant "knew that the substance . . . was controlled or regulated by federal drug abuse laws" was proper because it was "consistent with *Roberts*," which the Government described as the circuit's "Controlling Law" on the Analogue Act's mens rea element. Brief for Appellee United States of America 67, 71, *United States v. Zhang*, No. 13-

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[1] The Government briefs cited herein are available on Pacer.

3410; *see also id.* 73-74 n.21. In direct conflict with the Solicitor General's assertion to this Court, the United States represented that the "*Roberts* Court's description of the mental state requirement . . . was critical to its decision and thus was not dictum." *Id.* 72; *see also* U.S. Br. 3, *United States v. Gross*, *supra* (describing circuit conflict and citing *Roberts* as controlling Second Circuit precedent).

The Government thus is reduced to arguing that *Roberts* "is unsound and unlikely to be followed when the issue is squarely presented." BIO 22. But that prediction rings hollow. Rather than challenging *Roberts*' authority, the Government's position in the Second Circuit has been that "*Roberts* not only bound the district court but also binds future panels of this Circuit 'until such time as [it is] overruled either by an *en banc* panel of our Court or by the Supreme Court." U.S. Br. 71, *Zhang*, *supra* (citation omitted). And the Second Circuit has a "tradition of hearing virtually no cases *in banc*." *Ricci v. DeStafano*, 530 F.3d 88, 92 (2008) (Jacobs, J., dissenting from denial of rehearing en banc).

II. The Decision Below Is Wrong.

The Government's defense of the Fourth Circuit's decision on the merits is no reason to decline to resolve the circuit conflict, particularly because it is unpersuasive.

1. The Government begins its analysis by belaboring an uncontested point: the definition of an analogue does not require proof that the defendant knew the chemical nature of what he was selling. BIO 10-12. But that observation is beside the point: the definition of an ordinary controlled substance

does not contain a mens rea element either. *See* 21 U.S.C. § 802(6). The knowledge requirement arises from Section 841(a), which prohibits sale of a controlled substance only if the possession is "knowing[] or intentional[.]" And that requirement is made applicable to analogue prosecutions by Section 813, which commands that an analogue "shall . . . be treated" as a "controlled substance."

The Government acknowledges that in an ordinary drug prosecution, it must prove that the defendant knew that the substance he sold was a controlled substance. BIO 12. But it insists that applying that same requirement in an analogue prosecution is "nonsensical" because "controlled substance analogues are, by definition, not 'controlled substances.'" BIO 12 (citation omitted). That argument is itself pure nonsense. By its express terms, the Analogue Act provides that an analogue is *by definition* a controlled substance. *See* 21 U.S.C. § 813. Thus, in an analogue case, the Government proves that a defendant knew he was selling a controlled substance by proving that he knew he was selling a controlled substance analogue.

2. The Government complains that this is too hard and would undermine the Analogue Act's purposes, but that is both untrue and no reason to disregard the plain text of a criminal statute.

The Government itself emphasizes that the principal target of the Act was "underground" or "clandestine chemists" and their employers who were intentionally designing drugs to mimic the effect of controlled substances through minor changes in their chemistry. BIO 14. The United States does not claim that it has had any difficulty proving that such

defendants were aware of the similarities in chemical structure and effect between their products and the controlled substances they were designed to imitate.

Instead, the Government says that enforcing the statute as written "could impede prosecution of street-level dealers." BIO 14. But that complaint is difficult to square with the Government's insistence elsewhere in its brief that there is little practical difference between prosecutions in the Fourth Circuit (where no proof of knowledge is required) and the Seventh (where it is). *Id.* 20. And it is diminished further by the Government's insistence that it amply proved petitioner's knowledge in this case. *Id.* 24-27.

But even if it is true that prosecutions of low-level sellers would be more difficult if the statute were enforced by its terms, that is no basis for rejecting a straight-forward reading of the statute. As noted, the legislative history indicates that Congress's principal concern was with chemists, not ignorant salespeople. And any difficulty prosecuting sellers should be temporary, given the Attorney General's power to schedule substances on an emergency basis. *See* Pet. 4.

3. In addition to being overblown, the Government's policy arguments are perverse. At bottom, the Solicitor General argues that because the statute is so vague that an ordinary person often cannot know if what he is selling meets the statutory definition of a controlled substance analogue, the Government should be given special dispensation from the usual requirement that it prove the defendant knew the substance he was selling had the characteristics that made it illegal. *See* BIO 15-16. But our legal traditions run in the opposite

direction – when a criminal statute is so hopelessly vague that its meaning cannot be predicted prior to empanelling a criminal jury, the rule of lenity and doctrine of constitutional avoidance compel an interpretation that protects defendants, not one that facilitates prosecutions. *See, e.g.*, *United States v. Santos*, 553 U.S. 507, 519 (2008) (plurality).

III. The Government's Vehicle Objections Provide No Barrier To Review.

The Government's vehicle objections are meritless as well.

1. The Government asserts that "no circuit has squarely adopted the particular formulation petitioner advanced below" because "petitioner's proposed instruction did not provide for the inference *Turcotte* articulated." BIO 23. But as discussed, both the Second and Eighth Circuits have adopted petitioner's interpretation without adopting the *Turcotte* inference. In any event, the *Turcotte* inference is not a part of the offense elements even in the Seventh Circuit – it is simply an instruction the Government may request in order to assist it in proving that the defendant knew he possessed a controlled substance analog. *Cf. Gross*, *supra*, at *5 (adopting *Turcotte* inference in response to Government motion). In this case, the Government chose not to request a similar instruction, but that does not render petitioner's proposed jury instructions on the elements of the offense at odds with the law of the Seventh Circuit. *See Turcotte*, 405 F.3d at 528-29 (invalidating jury instructions

even though defendant did not request any instruction on permissive inference).[2]

Moreover, as the Government acknowledged below, even if petitioner's proposed instruction was incomplete, that does not insulate from review the district court's submission of an incorrect instruction on mens rea. U.S. C.A. Br. 55 (citing *United States v. Hurwitz*, 459 F.3d 463, 480 (4th Cir. 2006)).

2. The Government also claims, as it almost always does, that any error in this case was harmless. BIO 24-27. That contention – which neither court below addressed – is no basis to deny review. This Court regularly grants certiorari to resolve circuit conflicts, remanding to allow the lower courts to resolve any unreviewed claim of harmless error. *See, e.g.*, *Bullcoming v. New Mexico*, 131 S. Ct. 2705, 2719 n. 11 (2011); *Staub v. Proctor Hosp.*, 131 S. Ct. 1186, 1194 (2011); *Skilling v. United States*, 561 U.S. 358, 414 n.46 (2010); *Hedgpeth v. Pulido*, 555 U.S. 57, 62 (2008).

In any event, the Government's harmless error argument is meritless. The Government points to certain phone calls in which petitioner compared the physiological effect of some of his mixtures to the effect of cocaine and methamphetamine. BIO 25. But even if this evidence would have compelled a jury to find that petitioner knew of the substantial similarity in *effect* between his products and controlled substances, the Government points to no

---

[2] The court ultimately found the error harmless on other grounds inapplicable to this case. *See id.* at 529-30.

significant – much less compelling – evidence that petitioner was aware of the alleged substantial similarity in in *chemical structure*, an independent element of the crime. Even if the Fourth Circuit adopted the *Turcotte* inference, that would provide no basis for finding any instructional error here harmless beyond a reasonable doubt because under *Turcotte* a jury is simply "permitted – but not required" to draw the inference. 405 F.3d at 527. Thus, in *Turcotte* itself, the Seventh Circuit rejected any suggestion that the inference rendered the instructional error harmless, explaining that even if the jury "*could* have determined that Turcotte had the requisite knowledge" using the inference, "the evidence does not compel such a conclusion." *Id.* at 528 (emphasis added).

In fact, the Government's own expert testified that the alleged analogues in this case were *not* similar in chemical structure to cocaine or methamphetamine, but rather to a different controlled substance (methcathinone). Pet. App. 24a. Accordingly, the Government's harmless error argument depends on the resolution of what the court of appeals recognized to be an open question: whether "the pharmacological similarity element may be established by comparing the alleged analogue substance to a different controlled substance than used for comparison under the chemical structure element." *Id.* 25a n. 11.

The Government also points to facts – from the packaging of petitioner's products to vague snippets of phone calls – that it says "*suggest* his knowledge of *illegality*." BIO 24 (emphasis added); *see id.* 24-27. But any inference that petitioner knew his products

were illegal is rebutted by the uncontested testimony that petitioner sought the assistance of his law-enforcement brother-in-law to verify the legality of his products before he sold them. Pet. 7. And it is further disproven by petitioner's immediate destruction of certain products when one of their ingredients was classified as a controlled substance, as well as his refusal to sell those products to an undercover DEA agent on the ground that it was illegal. *Id.* 7-8.

The Government says that petitioner's efforts to comply with the law show that he knew his products were likely illegal. BIO 26. To the contrary, at most they suggest that petitioner was aware that his products could create psychological effects, which made further investigation into their legality prudent. Critically, however, Congress has *not* prohibited sale of all products that produce what the Government calls "drug effects." *Id.* Congress was aware that many lawful products – like the caffeine in coffee and energy drinks, or alcohol – can produce such effects. *See, e.g.*, H.R. Rep. No. 99-848, at 7. But it criminalized sale only of those substances specifically classified as controlled substances and those a seller knows to have a "substantially similar" chemical structure and effect. The Government's harmless error argument, like its interpretation of the statute, effectively reads out of the statute the important requirement that the defendant know *all* of the aspects of his product that make its sale illegal.

CONCLUSION

For the foregoing reasons, the petition for a writ of certiorari should be granted.

Respectfully submitted,

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December 19, 2014

No. 14-378

IN THE

Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN,

Petitioner,

v.

UNITED STATES OF AMERICA,

Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

JOINT APPENDIX

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Petition for a Writ of Certiorari filed Oct. 2, 2014
Certiorari Granted Jan. 16, 2015

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APPENDIX A

COURT OF APPEALS
RELEVANT DOCKET ENTRIES

General Docket
United States Court of Appeals for the Fourth Circuit

Court of Appeals
Docket #: 13-4349

Docketed: 05/13/2013
Termed: 05/21/2014

US v. Stephen McFadden

Appeal From: United States District Court for the Western District of Virginia at Charlottesville

Fee Status: fee paid

Originating Court Information:

District: 0423-3 : 3:12-cr-00009-GEC-1

Court Reporter: Brenda Dameron, Court Reporter Coordinator

Court Reporter: Sonia Ferris, Official Court Reporter

Presiding Judge: Glen E. Conrad, Chief U. S. District Court Judge

Date Filed: 02/08/2012

Date Order/Judgment: 04/30/2013

Date Order/Judgment EOD: 04/30/2013
Date NOA Filed: 05/10/2013
Date Rec'd COA: 05/13/2013

Prior Cases: None
Current Cases: None

UNITED STATES OF AMERICA Plaintiff - Appellee	Timothy J. Heaphy Direct: 540-857-2250 [On Brief] OFFICE OF THE UNITED STATES ATTORNEY Western District of Virginia P. O. Box 1709 Roanoke, VA 24008-1709 Ronald Mitchell Huber, Assistant U. S. Attorney Direct: 434-293-4283 Email: Ron.Huber@usdoj.gov [COR NTC Government] OFFICE OF THE UNITED STATES ATTORNEY Suite 104 255 West Main Street Charlottesville, VA 22902-0000 Jean Barrett Hudson, Esq., Assistant U. S. Attorney

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v.

STEPHEN DOMINICK MCFADDEN,
a/k/a Stephen Domin McFadden
Defendant-Appellant

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UNITED STATES OF AMERICA

Plaintiff - Appellee

v.

STEPHEN DOMINICK MCFADDEN, a/k/a Stephen Domin McFadden

Defendant - Appellant

05/13/2013	1	Criminal case docketed. Originating case number: 3:12-cr-00009-GEC-1. Date notice of appeal filed: 05/10/2013. Case manager: CTyree. [13-4349] (CT)
05/14/2013	4	DISTRICT COURT UPDATE. ORDER granting [178] Motion for Stay of execution of sentence as to Stephen Dominick McFadden (1) pending his appeal. Signed by District Judge Glen E. Conrad on 5/14/9.[13-4349] (JB)
07/30/2013	18	BRIEF by Appellant Stephen Dominick McFadden in electronic and paper format. Type of Brief: Opening. Method of Filing Paper Copies: hand delivery. Date Paper Copies Mailed, Dispatched, or Delivered to Court: 07/30/2013. [999162585] [13-4349] J. Snook
07/30/2013	19	FULL ELECTRONIC APPENDIX and full paper appendix by

		Appellant Stephen Dominick McFadden. Method of Filing Paper Copies: hand delivery. Date paper copies mailed dispatched or delivered to court: 07/30/2013. Has district court 90-day restriction expired for all transcripts included in appendix? No. The electronic appendix is initially restricted to case participants only. Case participants must be logged into CM/ECF to view the appendix prior to public release. Appendices in Immigration and Social Security cases will remain restricted.[999162628] [13-4349] J. Snook
07/30/2013	20	SEALED APPENDIX VOLUME(S) by Appellant Stephen Dominick McFadden in electronic and paper format. Method of Filing Paper Copies: hand delivery. Date Copies Mailed, Dispatched, or Delivered to court: 07/30/2013.. Filed Ex parte: N. [13-4349] J. Snook
07/30/2013	26	OPENING BRIEF (PAPER) file-stamped, on behalf of Stephen Dominick McFadden. Number of pages: [65]. Sufficient: YES. Entered on Docket Date: 08/12/2013. [999170457] [13-4349] (CT)

10/08/2013	34	Corrected BRIEF by Appellee US in electronic and paper format. Type of Brief: Response. Method of Filing Paper Copies: mail. Date Paper Copies Mailed, Dispatched, or Delivered to Court: 10/09/2013. [999213976] [13-4349] Ronald Huber
10/08/2013	35	RESPONSE BRIEF (PAPER) file-stamped, on behalf of US. Number of pages: [75]. Sufficient: YES. Entered on Docket Date: 10/15/2013. [999218232] [13-4349] (CT)
03/19/2014	42	ORAL ARGUMENT heard before the Honorable William B. Traxler, Jr., J. Harvie Wilkinson, III and Barbara Milano Keenan. Attorneys arguing case: Mr. J. Lloyd Snook, III for Appellant Stephen Dominick McFadden and Ms. Jean Barrett Hudson, Esq. for Appellee US. Courtroom Deputy: Cathy Eagles. [999318795] [13-4349] (CWE)
05/21/2014	43	PUBLISHED AUTHORED OPINION filed. Originating case number: 3:12-cr-00009-GEC-1. [999360180].Annotation added to opinion reflecting Supreme Court History. [13-4349]--[Edited 02/02/2015 by SJC] (CT)
05/21/2014	44	JUDGMENT ORDER filed.

		Disposition method: 13-4349 opn.p.arg. Decision: Affirmed. Originating case number: 3:12-cr-00009-GEC-1. Entered on Docket Date: 05/21/2014. [999360184] Copies to all parties and the district court/agency.. [13-4349] (CT)
06/04/2014	46	PETITION for rehearing en banc (FRAP 35) by Appellant Stephen Dominick McFadden. [13-4349] J. Snook
06/04/2014	47	Mandate stayed by FRAP 41(d)(1).. [13-4349] (CT)
06/17/2014	48	COURT ORDER filed [999377588] denying Motion for rehearing en banc [46] Copies to all parties.. [13-4349] (CT)
06/20/2014	50	MOTION by Appellant Stephen Dominick McFadden to stay mandate [FRAP 41(d)]. Date and method of service: 06/20/2014 ecf. [999380481] [13-4349] J. Snook
06/20/2014	51	Mandate stayed by FRAP 41(d)(1).. [13-4349] (CT)
07/07/2014	52	COURT ORDER filed [999389864] denying Motion to stay mandate [FRAP 41(d)] [50] Copies to all parties. [13-4349] (CT)
07/15/2014	53	Mandate issued. Referencing: [44] Judgment Order , [43] Published

		Authored Opinion. Originating case number: 3:12-cr-00009-GEC-1.. [13-4349] (CT)

APPENDIX B

DISTRICT COURT
RELEVANT DOCKET ENTRIES

U.S. District Court
Western District of Virginia (Charlottesville)
CRIMINAL DOCKET FOR CASE #:
3:12-cr-00009-GEC-1

Case title: USA v. McFadden et al

Date Filed: 02/08/2012

Date Terminated: 04/30/2013

Assigned to: District Judge Glen E. Conrad

Defendant (1)

Stephen Dominick McFadden *TERMINATED: 04/30/2013* *also known as* Stephen Domin McFadden *TERMINATED: 04/30/2013*	repre-sented by	John Lloyd Snook , III Snook & Haughey, P.C. P.O. Box 2486 Charlottesville, VA 22902 434-293-8185 Fax: 434-295-0698 Email: jlsnook@snookandhaughey.com *ATTORNEY TO BE NOTICED* *Designation: Retained*

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Pending Counts	Disposition
21:846=CD.F - CONSPIRACY TO DISTRIBUTE CONTROLLED SUBSTANCE-MDMC, MDPV and 4-MEC, Controlled substance analogues (2/15/12) (1s)	CBOP 33 mos as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. SR 30 mos. as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. FINE $1000 total, SA $900 total.
21:841A=CD.F; 21:841(a)(1) and (b)(1)(C)-	CBOP 33 mos as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently.

CONTROLLED SUBSTANCE - SELL, DISTRIBUTE, OR DISPENSE-MDPV and MDMC; Controlled substance analogues-(Ct 2; 7/25/11)(Ct 3; 8/11/11) (2s-3s)	SR 30 mos. as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. FINE $1000 total, SA $900 total.
21:841A=CD.F; 21:841(a)(1) and (b)(1)(C)-CONTROLLED SUBSTANCE - SELL, DISTRIBUTE, OR DISPENSE-MDPV,MDMC and 4-MEC; Controlled substance analogues-(Ct 4; 8/24/11)(Ct 5; 8/26/11)(Ct 6; 9/16/11) (4s-6s)	CBOP 33 mos as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. SR 30 mos. as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. FINE $1000 total, SA $900 total.
21:841A=CD.F; 21:841(a)(1) and	CBOP 33 mos as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8,

(b)(1)(C)-CONTROLLED SUBSTANCE - SELL, DISTRIBUTE, OR DISPENSE-4-MEC; Controlled substance analogue-(Ct 7; 10/27/11)(Ct 8; 1/6/12)(Ct 9; 2/2/12) (7s-9s)	& 9, to run concurrently. SR 30 mos. as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. FINE $1000 total, SA $900 total.

Highest Offense Level (Opening)

Felony

Terminated Counts	Disposition
21:846=CD.F; 21:846-CONSPIRACY TO DISTRIBUTE CONTROLLED SUBSTANCE-MDMC, MDPV and 4-MEC, Controlled Substance	Supersesding Indictment filed

analogues(2/8/12) (1)	
21:841A=CD.F; 21:841(a)(1) and (b)(1)(C)- CONTROLLED SUBSTANCE - SELL, DISTRIBUTE, OR DISPENSE- MDPV and MDMC (7/25/11) (5)	Supersesding Indictment filed
21:841A=CD.F; 21:841(a)(1) and (b)(1)(C)- CONTROLLED SUBSTANCE - SELL, DISTRIBUTE, OR DISPENSE- MDPV and MDMC (8/11/11) (7)	Supersesding Indictment filed
21:841A=CD.F; 21:841(a)(1) and (b)(1)(C)- CONTROLLED SUBSTANCE - SELL, DISTRIBUTE,	Supersesding Indictment filed

OR DISPENSE-MDPV and MDMC (8/24/11) (8)	
21:841A=CD.F; 21:841(a)(1) and (b)(1)(C)-CONTROLLED SUBSTANCE - SELL, DISTRIBUTE, OR DISPENSE-MDMC (8/26/11) (9)	**Supersesding Indictment filed**
21:841A=CD.F; 21:841(a)(1) and (b)(1)(C)-CONTROLLED SUBSTANCE - SELL, DISTRIBUTE, OR DISPENSE-4-MEC (10/27/11) (10)	**Supersesding Indictment filed**

Highest Offense Level (Terminated)

Felony

Complaints	Disposition
None	

Plaintiff

USA	represented by	Joseph D. Platania United States Attorneys Office Room 104 255 West Main Street Charlottesville, VA 22902 434-293-4283 Fax: 434-293-4910 Email: platania@charlottesville.org *ATTORNEY TO BE NOTICED*
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Dated Filed	#	Docket Text
02/08/2012	3	SEALED INDICTMENT as to Stephen Domin McFadden (1) count(s) 1, 5, 7, 8, 9, 10, Lois Lee McDaniel (2) count(s) 1, 2, 3, 5, 6, 7, 8, John Walter Collier (3) count(s) 1, 4, 5, 6, Dustin Wayne Orange (4) count(s) 1, 4. (hnw)
11/14/2012	121	SUPERSEDING INDICTMENT as to Stephen Dominick McFadden(1) count(s) 1s, 2s-3s, 4s-6s, 7s-9s. (hnw)
11/27/2012	126	NOTICE OF INTENT TO CALL EXPERT WITNESS (Attachments: # 1 Exhibit Resume of Dr. DiBerardino, # 2 Declaration of Dr. DiBerardino)(Huber, Ronald)
11/27/2012	127	NOTICE OF INTENT TO CALL EXPERT WITNESS (Attachments: # 1 Exhibit Dr. Prioleau Resume, # 2 Exhibit Dr. Prioleau Declaration)(Huber, Ronald)
12/19/2012	130	NOTICE of Intention to Call Expert Witness (Attachments: # 1 Exhibit Attachment 1 Resume of Nicole Edwards, # 2 Exhibit Attachment 2 Resume of Richard C.A. Isaacs, # 3 Exhibit Attachment 3 Resume of Jonathan Liu, # 4 Exhibit Attachment 4

		Resume of Julia L. Rummel,# 5 Exhibit Summary Testimony in Detailed Lab Reports)(Huber, Ronald)
12/21/2012	131	NOTICE Notice of Intent to Call Expert Witness (Supplement to Previous Notice) re 130 Notice (Other), Notice (Other) (Attachments: # 1 Exhibit Additional Lab Certificates) (Huber, Ronald)
12/21/2012	132	MOTION in Limine by Stephen Dominick McFadden. (Attachments: # 1 Exhibit A – DeBerardino Declaration, # 2 Exhibit B Prioleau Declaration, # 3Exhibit C McDaniel Phone Calls)(Snook, John)
12/26/2012	134	MOTION to Dismiss by Stephen Dominick McFadden. (Attachments: # 1 Exhibit Exhibits A through C)(Snook, John)
12/28/2012	135	RESPONSE to Motion by USA as to Stephen Dominick McFadden re 132 MOTION in Limine (Huber, Ronald)
01/03/2013	136	RESPONSE to Motion by USA as to Stephen Dominick McFadden re 134 MOTION to Dismiss (Attachments: # 1 Exhibit Declarations of DiBerardino, # 2Exhibit Declarations of

		Prioleau)(Huber, Ronald)
01/04/2013	137	ORDER denying 132 Motion in Limine as to Stephen Dominick McFadden (1); denying 134 Motion to Dismiss as to Stephen Dom inick McFadden (1). Signed by District Judge Glen E. Conrad on 1/4/2013. (ssm)
01/04/2013	138	Proposed Jury Instructions by USA as to Stephen Dominick McFadden (Huber, Ronald)
01/07/2013	141	Minute Entry for proceedings held before District Judge Glen E. Conrad:Jury Trial Day 1 as to Stephen Dominick McFadden held on 1/7/2013 Stephen Dominick McFadden (1) on Count 1s,2s-3s,4s-6s,7s-9s (Original entry deleted to correctly reflect only superseding counts to trial) To resume for Day 2 @ 830 am 1/8/2013 (Court Reporter Sonia Ferris) (ssm) (Entered: 01/08/2013)
01/08/2013	139	Proposed Jury Instructions by Stephen Dominick McFadden (Snook, John)
01/08/2013	142	Proposed Jury Instructions by USA as to Stephen Dominick McFadden (Huber, Ronald)
01/08/2013	144	Minute Entry for proceedings held

		before District Judge Glen E. Conrad:Jury Trial Day 2 as to Stephen Dominick McFadden held on 1/8 /2013. Gov't continues with evidence. Counsel to report 1/9/2013 @ 830, Jury by 845am. Deft to remain on bond (Court Reporter Sonia Ferris) (ssm) (Entered: 01/09/2013)
01/09/2013	143	MOTION in Limine by Stephen Dominick McFadden. (Snook, John)
01/09/2013	145	Minute Entry for proceedings held before District Judge Glen E. Conrad:Jury Trial Day 3 as to Stephen Dominick McFadden held on 1/9/2013. Govt and Deft rests Evidence open pending am consultation. Deft to remain on bond, Parties due 830, Jury @ 9 am. (Court Reporter Sonia Ferris) (ssm) (Entered: 01/10/2013)
01/10/2013	150	Minute Entry for proceedings held before District Judge Glen E. Conrad:Jury Trial Day 4 as to Stephen Dominick McFadden concluded on 1/10/2013 with guilty verdict all counts as to deft. Deft to remain on bond pending motions and sentencing

		04/29/2013 @ 10 am (Court Reporter Sonia Ferris) (ssm) (Entered: 01/14/2013)
01/10/2013	151	EXHIBIT LIST RE: January 7-10, 2013 Jury Trial in USA v. Stephen Dominick McFadden 3-12-cr-9-01. Exhibits not included here either returned to DEA Case agent at conclusion of case or Counsel for Deft due to bulky nature or b/c consisting of drug evidence. See last page of exhibit list for referenced exhibits. (Attachments: # 1 G1, # 2 G2, # 3 G3, G5,# 4 G3A, # 5 G5A, # 6 G8, G9, # 7 G10, # 8 G22-45 WITH GAPS, # 9 G46-64 WITH GAPS, # 10 G66-G86 WITH GAPS, # 11 G87-92, # 12 G96-104 WITH GAPS, # 13 D3,D5,D6)(ssm) Modified on 1/14/2013 to correct date to 1/10/2013 (ssm). (Entered: 01/14/2013)
01/10/2013	152	Jury Instructions as to Stephen Dominick McFadden (ssm) (Entered: 01/14/2013)
01/10/2013	153	JURY VERDICT as to Stephen Dominick McFadden (1) Guilty on Count 1s,2s-3s,4s-6s,7s-9s. (ssm) (Entered: 01/14/2013)
01/25/2013	156	MOTION for Acquittal by Stephen Dominick McFadden. (Attachments: # 1 Exhibit)(Snook,

		John)
04/19/2013	167	RESPONSE to Motion by USA as to Stephen Dominick McFadden re 156 MOTION for Acquittal (Huber, Ronald)
04/29/2013	168	PRESENTENCE INVESTIGATION REPORT (Sealed) as to Stephen Dominick McFadden (ch)
04/29/2013	169	Minute Entry for proceedings held before District Judge Glen E. Conrad:Sentencing held on 4/29/2013 for Stephen Dominick McFadden (1), Count(s) 1s, 2s-3s, 4s-6s, 7s-9s, CBOP 33 mos as to each of Cts 1-9, to run concurrently. SR 30 mos. as to each of Cts 1-9, to run concurrently. FINE $1000 total, SA $900 total. Deft to self report (Court Reporter Sonia Ferris) (ssm) (Entered: 04/30/2013)
04/29/2013	174	EXHIBIT LIST re Stephen Dominick McFadden (Attachments: # 1 Govt Ex 1, # 2 Deft Ex 1)(ssm) (Entered: 05/01/2013)
04/30/2013	171	ORDER DIRECTING FORFEITURE OF PROPERTY as to Stephen Dominick McFadden.. Signed by District Judge Glen E. Conrad on 4/30/2013. (ssm)
04/30/2013	172	JUDGMENT as to Stephen

		Dominick McFadden (1), Count(s) 1, 10, 5, 7, 8, 9, Supersesding Indictment filed; Count(s) 1s, 2s-3s, 4s-6s, 7s-9s, CBOP 33 mos as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. SR 30 mos. as to each of Cts 1, 2, 3, 4, 5, 6, 7, 8, & 9, to run concurrently. FINE $1000 total, SA $900 total.. Signed by District Judge Glen E. Conrad on 4/30/2013. (Attachments: # 1 Forfeiture Order) (ssm)
05/10/2013	175	MEMORANDUM OPINION as to Stephen Dominick McFadden. Signed by District Judge Glen E. Conrad on 5/10/13. (hnw)
05/10/2013	176	ORDER as to Stephen Dominick McFadden Denying 156 MOTION for Acquittal filed by Stephen Dominick McFadden. Signed by District Judge Glen E. Conrad on 5/10/12. (hnw)
05/10/2013	177	NOTICE OF APPEAL Final Judgment to 4CCA by Stephen Dominick McFadden Filing fee $ 455, receipt number 0423-177705 0. (Snook, John)
05/10/2013	178	MOTION to Stay Sentence under Rule 38(b). (Snook, John)
05/14/2013	181	ORDER granting 178 Motion for Stay of execution of sentence as to Stephen Dominick McFadden (1)

		pending his appeal. Signed by District Judge Glen E. Conrad on 5/14/13. (hnw) Modified on 5/15/2013 to corret year in date of signature (hnw).
06/12/2013	185	USCA Appeal Transcript Order Acknowledgment re 177 Notice of Appeal Final Judgment to 4CCA Court Reporter: Sonia Ferris. Appeal Transcript due by 7/19/2012. (hnw)
07/09/2013	194	MOTION for Forfeiture of Property by USA as to Stephen Dominick McFadden. (Attachments: # 1 Exhibit A: Declaration of Publication, # 2 Text of Proposed Order : Final Order of Forfeiture)(Huber, Ronald)
07/09/2013	195	FINAL ORDER OF FORFEITURE as to Stephen Dominick McFadden.. Signed by District Judge Glen E. Conrad on 07/09/13. (ssm)

APPENDIX C

EXCERPTS OF GOVERNMENT'S PROPOSED JURY CHARGE

Elements-Count One

In order to sustain its burden of proof for the crime of distribution of a controlled substance analogue as charged in Count 1 of the Indictment, the Government must prove the following essential elements:

One: That beginning in or around June 2011, and continuing thereafter until February 15, 2012, in the Western Judicial District of Virginia, two or more persons in some way or manner, made an agreement or understanding to accomplish a common plan;

Two: That the defendant knew the purpose of the agreement, and joined it willingly, that is, with the intent to further the purpose of the plan;

Three: That the purpose of the agreement was to distribute or to possess with intent to distribute, for human consumption, a mixture or substance containing

MDPV. MDMC/Methylone, and 4-MEC; and

Four: That MDPV, MDMC/Methylone, and 4-MEC were controlled substance analogues.

For you to find the defendant guilty of this crime the Government must prove all of these essential elements beyond a reasonable doubt; otherwise you must find the defendant not guilty.

Regarding the fourth essential element, to prove that a mixture or substance is a controlled substance analogue, the Government must prove the following beyond a reasonable doubt:

One: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act; and

Two: That the mixture or substance had an actual stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the

central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; or that the defendant represented or intended that the substance have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act.

* * *

Elements-Counts 2, 3, 4, 5, 6, 7, 8 and 9

In order to sustain its burden of proof for the crime of distribution of a controlled substance analogue as charged in Counts 2, 3, 4, 5, 6, 7, 8 and 9 of the Indictment, the Government must prove the following essential elements as to each count:

One: That the defendant knowingly and intentionally distributed a mixture or substance;

Two: That the mixture or substance was a controlled substance analogue; and

Three: That the defendant distributed the controlled substance analogue with the intent that it be consumed by humans.

For you to find the defendant guilty of this crime the Government must prove all of these essential elements beyond a reasonable doubt; otherwise you must find the defendant not guilty.

Regarding the second essential element, to prove that a mixture or substance is a controlled substance analogue, the Government must prove the following beyond a reasonable doubt:

One: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act; and

Two: That the mixture or substance had an actual stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the

stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; or that the defendant represented or intended that the substance have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act.

APPENDIX D

EXCERPT OF DEFENDANT'S PROPOSED JURY CHARGE

Definition of "Knowingly"

A person acts knowingly if he realizes what he is doing and is aware of the nature of his conduct, and does not act through ignorance, mistake, or accident. In deciding whether the defendant acted knowingly, you may consider all of the evidence, including what the defendant did or said.

You may find that the defendant knowingly participated in a conspiracy to distribute controlled substance analogues, and that he knowingly distributed controlled substance analogues, if you find beyond a reasonable doubt that he knew that the substances that he was distributing possessed the characteristics of controlled substance analogues – that is, that he knew that:

1. The chemical structure of the substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act;

2. The substance has an actual, intended or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or

greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substance Act; and

3. The substance would be consumed by humans.

You may find that the defendant knowingly distributed controlled substance analogues if you find beyond a reasonable doubt that he had a strong suspicion that the substances that he was distributing possessed the characteristics of controlled substance analogues, as defined above, and that he deliberately avoided the truth. You may not find that the defendant acted knowingly if he was merely mistaken or careless in not discovering the truth, or if he failed to make an effort to discover the truth.

Source: Seventh Circuit Pattern Jury Instructions, §4.10, with language from *Staples v. United States*, 511 U.S. 600, 114 S.Ct. 1793, 128 L.Ed.2d 608 (1994); see *Bryan v. United States*, 524 U.S. 184, 193, 118 S. Ct. 1939, 1946, 141 L. Ed. 2d 197 (1998).

APPENDIX E

EXCERPTS OF JURY CHARGE AS GIVEN BY DISTRICT COURT

It is now time for me to instruct you as to the substantive law that will govern your consideration of this case.

The defendant has been charged with conspiring to distribute and possess with intent to distribute, and with distributing, for human consumption, a mixture or substance containing controlled substance analogues, specifically 3,4-Methylenedioxymethcaninone (which is commonly known as "MDMC" or "Methylone"); 3-4-Methylenedioxypyrovalerone (which is commonly known as "MDPV"); and 4-Methyl-ethylcathinone (which is commonly known as "4-MEC").

I will refer to these substances by their abbreviations throughout my instructions.

It is charged in Count One of the indictment that beginning in or around June 2011, and continuing thereafter until February 15, 2012, in the Western District of Virginia and elsewhere, the defendant, Stephen Dominick McFadden, knowingly and intentionally conspired with others to possess with the intent to distribute and to distribute: (1) prior to October 21, 2011, a mixture or substance containing a detectable amount of MDMC, MDPV, or 4-MEC, controlled substance analogues as defined

Section 802(32) of Title 21 of the United States Code, with the intent for human consumption as provided in Section 813 of Title 21, in violation of Section 841 (a)(1) of Title 21; and (2) from October 21, 2011 and continuing until February 15, 2012, a mixture or substance containing a detectable amount of 4-MEC, a controlled substance analogue as defined in Section 802(32) of Title 21, with the intent for human consumption as provided in Section 813 of Title 21, in violation of Section 841(a)(1) of Title 21; and that this was all in violation of Section 846 of Title 21.

Section 846 of Title 21 makes it a separate federal crime or offense for anyone to conspire with someone else to do something which, if actually carried out, would be a violation of Title 21, United States Code, Section 841(a)(1).

Section 841(a)(1) makes it a crime for anyone to knowingly or intentionally distribute, or possess with intent to distribute, a controlled substance.

Section 813 of Title 21 provides that a controlled substance analogue shall, to the extent intended for human consumption, be treated as a Schedule I controlled substance.

A controlled substance analogue, for purposes of these statutes, is a substance: (1), which has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the

central nervous system of a controlled substance in Schedule I or II of the Controlled Substance Act; and (2) which has a chemical structure that is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act.

A "conspiracy" is an agreement between two or more persons to join together to accomplish some unlawful purpose or to accomplish some lawful purpose by unlawful means. It is a kind of "partnership in crime" in which each member becomes the agent or partner of every other member.

For you to find the defendant guilty of the conspiracy offense described in Count One of the indictment, you must be convinced that the government has proven each of the following elements beyond a reasonable doubt:

FIRST: that beginning in or around June 2011, and continuing until February 15, 2012, two or more persons, directly or indirectly, reached an agreement or understanding to accomplish a common plan;

SECOND That the defendant knew the purpose of the agreement, and joined in it willingly, that is, with the intent to further the purpose of the plan;

THIRD: That the purpose of the plan was to distribute or possess with intent to distribute, for human consumption, a mixture or substance containing MDPV, MDMC/ Methylone, or 4-MEC, which has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to that or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; AND

FOURTH: That the chemical structure of MDPV, MDMC/ Methylone, or 4-MEC is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act.

For you to find the defendant guilty of the conspiracy offense charged in Count One, the government must prove each of these essential elements beyond a reasonable doubt. Otherwise, you must find the defendant not guilty of this offense.

As I stated earlier, a conspiracy is an agreement between two or more persons to join together to accomplish some unlawful purpose.

The government must prove that the defendant and at least one other person knowingly and deliberately arrived at an agreement that they, and perhaps others, would distribute, or possess with intent to distribute, a controlled substance analogue, by means of some common plan or course of action.

In other words, the evidence in this case must show, beyond a reasonable doubt, that the defendant knew the purpose or goal of the agreement, and that he entered into the agreement intending in some way to accomplish the goal or purpose by this common plan or joint action.

The government does not need to prove that the alleged conspirators entered into any formal agreement or that they directly stated between themselves all of the details of the scheme.

By its very nature, a conspiracy is clandestine and covert, thereby frequently resulting in little direct evidence of such an agreement. Hence, a conspiracy is generally proven by circumstantial evidence and the context in which circumstantial evidence is adduced. Indeed, a conspiracy may be proven wholly by circumstantial evidence.

Circumstantial evidence tending to prove a conspiracy may consist of the defendant's relationship with other members of the conspiracy, the length of this association, the defendant's conduct, and the nature of the conspiracy.

Circumstantial evidence sufficient to support a conspiracy need not exclude every reasonable hypothesis of innocence, provided the totality of the evidence is sufficient to prove guilt beyond a reasonable doubt. While circumstantial evidence may sufficiently support a conspiracy conviction, the government must nevertheless establish proof of each element of a conspiracy beyond a reasonable doubt.

I further instruct you that the government is not required to show that all of the members of the alleged conspiracy were named or charged. However, the defendant may not be convicted for conspiring only with a government informant to commit an unlawful act.

The government does not need to prove that all of the people whom the evidence shows were actually members of a conspiracy agreed to all of the means or methods set out in the indictment.

Similarly, the government does not need to prove that the defendant joined the agreement at its beginning, that all of the details of the scheme were actually carried out, or that the alleged conspirators succeeded in accomplishing their unlawful objectives.

Mere presence at the scene of an event, however, even with knowledge that a crime is being committed, or the mere fact that certain persons may have associated with each other and may have assembled together and discussed common aims and interests, does not necessarily establish proof of the

existence of a conspiracy. Additionally, a person who has no knowledge of a conspiracy, but who happens to act in a way which advances some purpose of a conspiracy, does not thereby become a conspirator.

I also tell you that the existence of a mere buyer-seller relationship alone is insufficient to support a conspiracy conviction, even if the buyer intends to resell the purchased drugs to others. However, you may consider the purchase of drugs for resale, along with all the other evidence, in determining whether there was a conspiratorial agreement between the buyer and seller, or other persons, to distribute or possess with intent to distribute, controlled substance analogues.

If, and only if, it appears from the evidence in the case that a conspiracy did exist, and that the defendant was one of the members of the conspiracy, then you may consider the acts and statements by any person likewise found to be a member as evidence in the case as to the defendant. This is true even though the acts and statements may have occurred in the absence of and without the knowledge of the defendant, provided that such acts and statements were knowingly done or knowingly made during the existence of the conspiracy and in furtherance of some intended object or purpose of the conspiracy. Otherwise, any admission or incriminatory statement made, or act done by one person outside of court, may not be considered as evidence against any person who was not present, did

not see the act done, or did not hear the statement made.

I will now instruct you on the offenses charged in Counts Two through Nine of the indictment.

In each of these counts, the defendant is charged with knowingly and intentionally distributing, in the Western District of Virginia, a mixture or substance containing a detectable amount of one or more controlled substance analogues, as defined in Section 802(32) of Title 21, knowing that the substances were intended for human consumption, as provided in Section 813 of Title 21, all in violation of Section 841 (a)(1) of Title 21.

Specifically, Count Two charges that on or between July 11, 2011 and July 25, 2011, the defendant knowingly and intentionally distributed a mixture or substance containing MDPV or MDMC.

Count Three charges that on or between July 29, 2011 and August 11, 2011, the defendant knowingly and intentionally distributed a mixture or substance containing MDPV or MDMC.

Count Four charges that on or between August 10, 2011 and August 24, 2011, the defendant knowingly and intentionally distributed a mixture or substance containing MDPV, MDMC, or 4-MEC.

Count Five charges that on or about August 26, 2011, the defendant knowingly and intentionally

distributed a mixture or substance containing MDPV, MDMC, or 4-MEC.

Count Six charges that on or about September 26, 2011, the defendant knowingly and intentionally distributed a mixture or substance containing MDPV, MDMC, or 4-MEC.

Count Seven charges that on or about October 27, 2011, the defendant knowingly and intentionally distributed a mixture or substance containing 4-MEC.

Count Eight charges that on or about January 6, 2012, the defendant knowingly and intentionally distributed a mixture or substance containing 4-MEC.

Count Nine charges that on or about February 2, 2012, the defendant knowingly and intentionally distributed a mixture or substance containing 4-MEC.

In each of these counts, the indictment alleges that the substances at issue were controlled substance analogues, and that the defendant knew that they were intended for human consumption.

In order to sustain its burden of proof for the crime of distributing a controlled substance analogue as charged in Counts Two through Nine of the indictment, the government must prove the following

essential elements beyond a reasonable doubt as to each Count:

FIRST: That the defendant knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act;

SECOND: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act;

AND

THIRD: That the defendant intended for the mixture or substance to be consumed by humans.

For you to find the defendant guilty of the offense charged in Counts Two, Three, Four, Five, Six, Seven, Eight, and Nine, the government must prove each of these essential elements beyond a reasonable doubt, as to each count. Otherwise, you

must find the defendant not guilty of the offense charged in that count.

The government is required to prove that one or more of the substances involved in this case was, in fact, a controlled substance analogue of a Schedule I or Schedule II controlled substance.

I tell you that 3,4-methylenedioxmethamphetamine (also known as "MDMA") and methcaninone are Schedule I controlled substances under the Controlled Substance Act.

The term "to distribute," as used in these instructions, means to deliver or to transfer possession or control of something from one person to another. The term includes the sale of something by one person to another.

To do something "knowingly," as used in these instructions, means to do it voluntarily and intentionally, and not by ignorance, accident, or mistake. In deciding whether the defendant acted knowingly, you may consider all of the evidence, including what the defendant did or said.

If I have not defined words or terms used in the instructions, I tell you that you should apply the terms' ordinary, everyday meaning.

The indictment charges that certain events or conduct occurred "on or between" or "on or about" a

specific date. The government does not have to prove the events or conduct occurred on the exact dates alleged. Rather, it is sufficient if they occurred on a date reasonably near the date stated in the indictment.

APPENDIX F

EXCERPTS OF TESTIMONY OF MARK FRAZIER JAN. 7, 2013

[41]

Q. I'm showing you what has been marked for identification as Government's 6 and 7. Can you start with 6 and tell the jurors what's in 6?

A. Yes. Government Exhibit 6 is a DEA evidence bag, again with a clear Ziplock container which belongs to the police department. Inside of that was the light blue jeweler's bag, with a white powder inside. That was one of the bags bought on that day and was recovered by me.

Government Exhibit #7 is the same thing, same type packaging and is a smaller, light blue jeweler's bag with a powdery-type substance in it and again, that was one of the substances bought and recovered into my possession.

* * *

[46]

Q. We're about to go through nine drug exhibits. I think the easiest way, I'll just state what they are and show them to you and you can briefly explain to the jury what they are.

Government's 11, for identification.

A. This is the evidence bag, DEA evidence bag, with an off-white powder substance inside that was

seized from the search of the store. Has another, looks like another bag inside of that as well.

Q. For identification, Government's 12.

A. Exhibit 12 is also, again, it's packaging, [47] evidence packaging, with a Ziplock bag with an off-white powder-like substance inside, also seized from the store.

Q. For identification, Government's 13.

A. 13, again, is the packaging. Inside of that is a Ziplock bag with off-white powder-like substance in that as well, seized from the store.

Q. For identification, Government's 14.

A. 14 is the evidence packaging and this has a Ziplock bag with off-white loose powder in it. It also has, looks like several jeweler's bags and then three plastic containers in it as well. Looks like possible residue or very small amount of powder in that. It was all seized from the store.

Q. Government's, for identification, 15.01 and 15.02 have two different substances I'll ask you to talk about. There's drug Exhibit 25.01 and 25.02. When you hold that up, if you could just tell the jurors, there's two different things in there we're talking about.

So for identification, Government's 15.01 and 15.02.

A. Inside the evidence packaging, there's one clear, Ziplock with white powder in that and that has in blue pen, Exhibit 25.01 on it.

Here is a clear plastic bag with a couple smaller [48] baggies and that has Exhibit 25.02 on it.

There are also some of the plastic vials again. That was all seized from the store.

Q. For identification, Government's 16.

A. Inside the packaging again are Ziplock bags with powder. Some of the blue jeweler's bags again, and then the black and clear plastic vials, with writing on it; Alpha, prices and stuff. Evidence seized from the store on that day.

Q. For identification, Government 17.01 and 17.02. Again, there are a couple different substances in that bag?

A. Inside the packaging was 27.01. It's a white powder. Inside packaging is a clear, plastic container. 27.02 is a separate baggy, again, of a kind of off-white powder and some more packaging.

* * *

[60]

Q. Did something come through the mail that you entered into evidence?

A. That's correct; inside the FedEx package.

Q. Showing you 32 and 33, marked for identification.

A. That's correct. There was two packets of the off-white powder that was sent through the FedEx package.

* * *

[67]

Q. Did something come in the mail?

A. Yes, it did.

Q. 43 and 44, for identification.

A. 43 and 44 are -- is the product that came in the FedEx packaging.

43, you can maybe tell from this side. That's going to be yellowy paste-like substance now in the Ziplock bag.

44 is a Ziplock type bag with a white powder.

* * *

[191]

Q. Is there anything, labelling wise, on what was sent that's consistent with what was in the phone call?

A. Yes. Inside on the package that was recovered from the FedEx package, there's a sticker, green sticker, that has Sheen's Winning Bath Salts written on the sticker. Then it has another -- it does have another sticker on that as well.

APPENDIX G

TESTIMONY OF LOIS MCDANIEL
JAN. 8, 2013

[8]

Q. What were the quantities you were ordering from him?

A. 10 to 30 grams.

Q. How much were you paying per gram?

A. $15 per gram.

Q. How often were you getting the 10 to 30-gram shipments from him?

A. One to two weeks, every one to two weeks.

Q. Were you doing anything with the substance that he sent to you initially?

A. Not initially, no.

Q. A little bit later on, did you start doing something to the substances he was sending you?

A. Yes. We broke it down with B6, which is Vitamin B6. If we had a gram, then we put a gram of B6 in it as well to bring the potency down.

Q. Would that also help you make more money?

A. Yes.

Q. You said you were paying $15 a gram to Mr. McFadden. How much were you selling a gram for? [9]

A. At first, we were selling it for 30. Then we went all the way up to $70.

MR. PLATANIA: Can I have continuing permission to approach?

THE COURT: (Indicating yes)

BY MR. PLATANIA:

Q. I'm showing you what's been marked for identification as Government's 18. Do you recognize that?

A. Yes, I do.

Q. What is that?

A. It's a scale.

Q. You talked about adding B6 to the product being sent to you. Would that scale be used while you were doing that?

A. Yes.

Q. That's how you'd weigh it out to know?

A. Yes.

MR. PLATANIA: Move in Government's 18.

THE COURT: Receive 18, without objection.

(Government Exhibit #18 was admitted into evidence)

MR. PLATANIA: Can I have one minute, Judge?

(Government counsel conferred).

BY MR. PLATANIA: [10]

Q. So Lois, I'm about to hand you a series of envelopes. On the front, do you see anywhere that you've initialed and put a date?

A. Yes. I initialed it and dated it here.

Q. Who was with you when you initialed it and dated it?

A. You were and my attorney as well.

Q. We had a conversation about the contents of that packaging?

A. Yes.

Q. Can you hold it up for the jurors, please? There appears to be a small, blue baggy in there?

A. Yes.

Q. Do you know where that came from?

A. Yes; Steve McFadden.

Q. How do you know that that came from Steve McFadden?

A. Steve McFadden is the only person that ever sent me any bath salt in the Ziplock bags.

Q. I'm going to hand you Government's 6 and it's the same question for everything I hand you, if you can tell the jurors whether you initialed it and what's contained in it.

A. I have dated it and initialed it and it's another Ziplock bag with the bath salts in it and it came from [11] Steve McFadden.

Q. How do you know that?

A. The reason I know that is that he's the only one that ever sent me anything in Ziplock bags.

Q. Government 7.

A. Same thing. I have dated it and signed it. Again, Ziplock bag that came from Steve McFadden.

Q. Government 6 appears to have a letter on the back?

A. Yes.

Q. Can you tell the jurors what letter that looks like?

A. It's an N for "No Speed." The letter is in my handwriting because Steve told me the "No Speed" and "Speed" were the two different ones I was buying from him at the time. So we would put an N on the Ziplock bag so we would know which one was in it.

I did sign and date this one as well.

Q. Government 7, if you can see, there looks like there might be a letter in the upper left-hand corner. Are you able to see that?

A. Yes. This one here, I signed and dated as well and the letter that's up here is an S, which is for the "Speed."

Q. Whose handwriting is that? [12]

A. That is in my handwriting.

The Ziplock bag came from Steve McFadden.

Q. Who gave you the information that let you label those packages?

A. Steve McFadden gave me the information.

* * *

[17]

Q. Lois, for the record, I've handed you Government's 11. You can proceed.

A. I did initial this and this here is another package from Steve McFadden, the only person that ever sent me Ziplock bags.

Q. Government's 12.

A. I initialed this one as well. This is Ziplock bags from Steve McFadden, the only person that ever sent Ziplock bags. On this one, he has "not for human consumption" and that is in his handwriting and not mine.

Q. Lois, I have to ask a question. There appears to be a pink sticker at the bottom there.

A. Yes.

Q. Can you read that for the jurors and explain to them what that is?

A. Yes. This pink sticker says "The New Up," which [18] is a new bath salt.

Q. Where did that sticker come from?

A. That sticker came from Steve McFadden as well.

Q. Handing you Government's 13.

A. I signed and dated this on the front as well and this is another Ziplock bag from Steve McFadden. This one says "New Up, 4M, good." This came from Steve McFadden as well.

Q. Whose handwriting is that?

A. It's Steve McFadden's handwriting.

Q. Government's 14. Same questions about what's within the packaging.

A. I dated and signed this one as well. This here is Ziplock bag, which I always received with the

bath salts in it. These here are called little vials that Steve McFadden sent me as well. The handwriting on the top of the vials is my handwriting, but the vials came from Steve. So did the Ziplock bag.

Q. This is labeled Government's 15.01 and 15.02. I'd like you first to talk about the blue baggy and then there's something with a black top on it?

A. I dated and signed this one as well. Of course, the Ziplock bag that came from Steve McFadden. He would send me little baggies to separate it in and also the vials. I have "no" on some of these. It looks like all [19] of these are "no" and that's in my handwriting. That's what he would send me to sell the merchandise in.

Q. Who would give you the information that would allow you to label those?

A. Steve McFadden gave me the information in order to know what to label these with.

MR. DIAMOND: I'm sorry, Judge. I couldn't hear the last part.

BY MR. PLATANIA:

Q. Could you repeat the last part?

A. Sure. Steve McFadden would give me information for the N or the S or the Up. Anything, he always gave me information on it.

Q. Government 16. Again, it looks like, and if you could talk about each, one at a time, the blue baggies, the black-top containers and then a plain baggy.

A. Okay. I dated and signed this one as well. This is the baggy that I received from Steve McFadden with the bath salt in it. Here, this has Alpha written on it. This is the baggies that I received from Steve. I wrote Alpha on there myself. That's my handwriting. These are the vials that Steve would send me and I wrote on those as well, but the vials and the baggies came from Steve McFadden.

APPENDIX H

TESTIMONY OF RICHARD ISAACS
JAN. 8, 2013

[149]

Q. And then there appears to be in one of these envelopes kind of a beige crystalline powder of some sort.

A. Yes.

Q. Is that what led to the .48 grams being tested, the 121.01?

A. Yes. So, this 121.01 means that when I originally started the analysis, there was 0.48 grams of this beige crystalline powder.

APPENDIX I

TESTIMONY OF TOBY SYKES
JAN. 8, 2013

[174]

Q. If you could now please tell the jurors what you felt like compared to when you used meth to when you ingested those substances?

A. These substances right here was probably, to my experience, was ten times more potent than meth has ever been.

Q. What sort of things would you feel when you used them?

A. Extreme paranoia, sexual, depression, anxiety. It fluctuated because this drug never had the same – you know, every time you used the drug, you would have a different feeling.

Q. In what amounts would you use those in?

A. Anywhere between half gram to quarter gram shots.

Q. In what form were they in when you got them from [175] the video store?

A. All powder.

Q. How would you ingest or take the bath salts?

A. I would shoot them.

Q. What would you do to the powder to get it into a form to shoot it?

A. I would add water to it.

Q. Did you take it out and put it into something else?

A. Sometimes I would. Sometimes I would use like these little containers, envelopes. It depends on where I was at.

Q. You talked about the high lasting, I think, 12 to 15 hours for meth. How long would the high from the half to – quarter to half gram of that substance last?

A. Maybe a day, a good night.

APPENDIX J

TESTIMONY OF DANIEL MCFADDEN
JAN. 9, 2013

[65]

Q. I'm going to show you what's been admitted as Government's 40. There are just some plastic bags in here. Did you ever see any of those in your brother's possession?

A. Yes, things like it, yes. I'm not sure if it was exactly this stuff.

Q. You saw white powder substance in unmarked baggies?

A. Yes. Actually, sometimes they would be in like lump amounts.

Q. Like bigger amounts.

I'll show you Government's 16. Bigger amounts like that bag right there?

A. Yeah.

Q. You've seen them with these blue baggies or no?

A. No, I never saw any blue baggies of any kind, no.

Q. What about these small vials with black tops?

A. Those things, I did see, yes, small plastic containers.

Q. Did those have word on them like these words; Tranquility, Energizer, Stress Buster?

A. Something along those lines. I don't know exactly.

Q. What he flushed, you said, was a powder?

A. Yes.

APPENDIX K

TESTIMONY OF THOMAS DIBERARDINO JAN. 9, 2013

[2]

Q. Doctor, would you please introduce yourself to the jury?

A. My name is Tom DiBerardino. I'm a chemist with the Drug Enforcement Administration, stationed in headquarters.

* * *

[10]

Q. Does the DEA maintain a list of controlled substance analogues?

A. We do have a table for our own benefit to keep track of what we've analyzed, yes.

Q. So when you say for our own benefit, what you're suggesting, it's an internal document?

A. It's an internal document, yes.

Q. It is not published on the Internet on the DEA website.

A. No.

Q. Why is it only an internal document?

A. First, it just makes sense to keep a record of what we've done. That's obvious. But the important thing is that if we go public with this list, unfortunately, the list is not inclusive. We

can in no way maintain an all inclusive list of these analogues because they appear faster than we can write our names and we just don't have the manpower to devote ourselves full time to this issue. So we look at analogues as they come up, as investigations come up, as laboratories analyze these, as toxicology reports come in. We start noticing them. If trends continue, we take them more [11] and more seriously to the point where we do a full analysis, and I'm talking about a DEA-wide analysis. It's not just me. We do not publish that, again, because if we do, a person may go to that list and not see a particular substance and think that it is not an analogue because it's not on the list.

APPENDIX L

GOV'T EXH. 68A

8-25-11 2.txt

August 25, 2011 Phone call between Steve McFadden (SM) and Lois McDaniel (LM) boss

SM: Lois.

LM: Hey.

SM: Hey.

LM: Sorry I missed your call, but I was with a customer.

SM: Okay. Gotta talk fast, girlfriend, because my boss is around.

LM: Oh, okay. I thought you were the boss.

SM: Not here, not at this place. I am the boss at the other place, but I am not the boss where I work at my day job.

LM: Okay. I guess question is what is you best product at this time as far as your salts?

SM: That's the Sheen's

LM: Which one?

SM: The No Speed Limit.

LM: The No Speed Limit. Okay. Um, I know what that one is, and then you got a new one, Alpha?

SM: Right, the Alpha. But I gave you the straight chemical. That's straight Alpha. That is the replacement for the MDPV.

LM: Okay. What is next, what's the next best?

SM: Ah, the special blend I gave to you is probably the other stuff. That's the most powerful stuff out there, along with the No Speed Limit.

LM: Okay. What categories are they in?

SM: Ah, as far as anything really, the No Speed Limit is the fastest one. The one that I make for you is probably just a hair under that with just a little bit of a different type of bath, you know, and the Alpha is, well, the Alpha mixed with the 4-MEC gives you a No Speed Limit-like feeling, just not as intense.

LM: Okay. Which one of those would be like cocaine, though?

SM: Probably the Alpha with the MEC.

LM: Oh, okay. Well, see I didn't know that. What about the "S?"

SM: That would be the No Speed Limit.

LM: Okay, and that one's like the crystal meth?

SM: Well, I mean, people compare it to it, but, you know, I don't know nothing about that.

LM: Oh, okay. But you have the new up. What is the new up then?

SM: Well, that is the new up. That is the 4-MEC and the Alpha. That is the closest to the other thing you were saying.

LM: Oh, okay. All right. So, if this people ask me... okay, so the No Speed Limit is going to be like the cocaine then.

SM: No, like the S.

LM: And then the crystal meth one is which one?

SM: That is the crystal meth one, the No Speed Limit.

LM: Okay. All right. Well, I need you to send me some more? like you've been doing then. I gotta have it and I need it as soon as possible. Because I know that I'm not normally running out, but I am.

SM: Okay.

LM: Um, how much does it cost to ship to me overnight?

SM: Uh, normally like forty some odd dollars. I don't know why it's so damn expensive, but it is.

LM: All right. That's fine. But if I buy a thousand dollars, you wouldn't give me shipment free?

SM: Oh, hell, yeah, I would.

LM: All right. Well then, it sounds like we've got a deal then. And since you're in a hurry and your boss is there, and I don't want him to hear you talking to me, I can tell that might be a problem, um, what I'd like for you to do is ship to me overnight. But what I want you to do is I want

you to, I'm going to leave it up to you to figure out how much of which ones I get, okay? So, I get three different ones and I want you to give me so much of this one, so much of this one, so much of this one.

SM: Okay.

LM: And I'm gonna need those bags that you sent me, the little funny looking bags.

SM: Okay.

LM: I appreciate it. Um, if you got a handful of the bottles laying around...

SM: The what? Oh, yeah, the bottles. Sure. No problem.

LM: So, nothing else new then? That is what I was hoping to get from you. Nothing else new?

SM: Okay. No, nothing right now. But I'll have something new. I'll explain it to you when I get off work. I'll give you a call. Okay.

LM: All right. Well, send it to me now and I'll send you, I'll guess I'll talk to you Monday then?

SM: Ah, yeah. I'll talk to you. I'll give you a buzz after work anyway. All right?

LM: Okay.

SM: All right, girl.

LM: Now, um, you are gonna ship it to the same address as normal and it's going to be a thousand dollars, right?

SM: Yes.

LM: Because that is what I need to know so I can go ahead and get the money order this evening. I don't wanna, ah, so I'll have that tomorrow. That's the main thing.

SM: Yes.

LM: Okay. I appreciate it.

SM: Okay.

LM: Don't let me down.

SM: You got it.

LM: Thanks.

SM: All right, girl. I'll talk to you later.

LM: Bye.

SM: Bye.

End of call.

LM: Okay.

APPENDIX M

GOV'T EXH. 69A

10-26-11 3.txt

October 26, 2011. 3

(Phone ringing)

McDaniel: Hey.

McFadden: Hey. I can't take your calls sometimes because I'm either in meetings, I have, I have a regular job, you know.

McDaniel: That, that's okay. I just need to make an order. Can I make it right now?

McFadden: (inaud)

McDaniel: Can you get it out for me today?

McFadden: Listen to me carefully. I do not have, I have like almost nothing. I'm almost completely out myself. I'm waiting for my chemicals to come in. They should be here any day, but I may be able to get you enough to hold you over, but it's gonna be, um, actually one type of thing. It's 4-MEC. It's the, um, um, I, I call it the new

Sheens. It's the, ah, (inaud). And I'm getting good reviews on it. It's not bad, it's just different.

McDaniel: What, it's, it's something I've never had before?

McFadden: Ah, no. You've never had it before.

McDaniel: Okay. And, but you're saying it's good.

McFadden: You know, I, I'm selling it. I'm not having a problem getting rid of it or anybody liking it, ah, it's just, it's a little bit more, ah, ah, a little bit more energizing, and, and it's not as long lasting. You understand what I'm saying?

McDaniel: Yeah.

McFadden: But it, it's, ah, it's a harder hit to a shorter period of time.

McDaniel: Okay. What is it...

McFadden: Now...

McDaniel: ...what is it like, though? What kind of people like it?

McFadden: Ah, pretty much the ones who like (inaud)

McDaniel: Um, like the people that like the, um, synthetic cocaine or the synthetic meth?

McFadden: The meth. Yeah, more, more like the meth, ah, side.

McDaniel: Uh huh. Well, um, how much can I get for like three hundred dollars?

McFadden: Oh, ...

McDaniel: Two hundred? Do you have a two hundred package?

McFadden: (inaud) I mean, for COD it's not even worth it. But, um, ...

McDaniel: Well, ...

McFadden: (inaud) dollars I'll send it to ya.

McDaniel: All right, so I can get like two hundred dollars worth and, and you'll charge me forty for sending it overnight like normal.

McFadden: Yes.

McDaniel: Okay. That sounds good.

McFadden: All right.

McDaniel: All right. And I'm sorry that I keep worrying you to death, but these people worry me to death.

McFadden: No, I, listen, I, I hear you. Believe me, I, I'm breaking my China connection (inaud) because, ah, I, I'm like, I swear to God, I'm backed up like you wouldn't believe. I have a bazillion orders on my website. Ah, everybody and their mother is trying to buy it, and I, I have nothing to give 'em. I, I, I don't want to let go of the chemicals 'cause I have too many people buying, ah, you know, the aromatherapy.

McDaniel: Mmm.

McFadden: So, I, I, I'd rather keep that going, and then you know, everybody who's buying the straight chemicals, you know, they'll just have to wait 'til it comes in.

McDaniel: Okay. Well, can you get it out tonight though?

McFadden: Yeah. Ah, which address?

McDaniel: The [redacted].

McFadden: (inaud) do me a favor. Can you text that to me, please? Please text that to me.

McDaniel: I will. I will.

McFadden: Okay.

McDaniel: I'll do it within five minutes.

McFadden: Okay. Great.

McDaniel: Ah, can, can you get me some, can you get me some stuff in a week? Since you're low?

McFadden: Ah, oh you lost me.

McDaniel: Can, can I get some more stuff in a week?

McFadden: You should be able to.

McDaniel: Okay.

McFadden: Actually, I should, I should have a, ah, ah, a good, ah, a good amount of stuff by Wednesday of next week.

McDaniel: Wednesday? Perfect.

McFadden: (inaud)

McDaniel: Okay. So, that's perfect. We'll give you a call in a week or two then...

McFadden: Okay.

McDaniel: ...see what you got.

McFadden: You got it.

McDaniel: All right. Well, thank you.

McFadden: All right. Don't forget, text me the address.

McDaniel: I'll do it right now.

McFadden: All right. Yeah, 'cause I gotta do it by hand. I gotta fill out, ah, fill out the form by hand.

McDaniel: Okay.

McFadden: Okay?

McDaniel: Thank you.

McFadden: All right, Lois. You got it.

McDaniel: Bye.

McFadden: Bye bye.

(Beep)

McDaniel: All right. Now, I gotta te-

Orgon: That was a phone call from Steve McFadden to CI from phone number [redacted]. 5:40 p.m. October 26, 2011. SA Ed Orgon, Detective Mark Frazier.

End of Tape.

APPENDIX N

GOV'T EXH. 70A

Nov. 29, 2011 Phone Call between Steve McFadden (SM) and Lois McDaniel (LM).

SM: Hey, Lois. How are you?

LM: Hey, Steve. How are you?

SM: Pretty good. Can't complain.

LM: I need to make an order and I have a special request.

SM: What's that?

LM: My people are hoping I could get my hands on Speed and No Speed again.

SM: Uh, the closest thing I have is the Hardball, and actually uh, I added a little extra kick to it, so...

LM: Okay, let's go for it then if that's the only thing. Do you have anything better than that?

SM: Unless you are going to go for the straight chemicals, if ya know what I mean.

LM: Sure, yeah.

SM: Uh, ...

LM: I only have four hundred fifty dollars though, so you gotta treat me good today.

SM: How much?

LM: Four hundred and fifty. It's all I got today.

SM: One fifty?

LM: No, no. Four fifty.

SM: Oh, four fifty. I was gonna say, Lois, that doesn't sound like you. Are you sure I'm talking to the right person?

LM: All right. So, what can you send me for four fifty? Can you send me half and half?

SM: What? Half of the straight chemical and half of that?

LM: Yeah.

SM: Uh, yeah, I can do that. What I need to know from you, and see this is, are your people using it for aromatherapy or are they putting it directly on a burner?

LM: Oh, I don't know, I never asked.

SM: You know what I'm saying?

LM: I don't know. I don't know. Is there one that has to be used one way versus another?

SM: Oh, some people like to put it directly on a burner and then it smokes. You know, you smoke.

LM: Oh, well, I don't know.

SM: And some people like to use it just as an aromatherapy to, you know, to smell it.

LM: Oh, okay, they like the smell of it. Okay.

SM: You know what I mean?

LM: Okay.

SM: Right. So, it depends on usage which chemical I would send you.

LM: Oh, well, gee, well, give me one that will do both, or one that will do one or one that will do both or whatever.

SM: Well, actually, they all do both. Well, not all but some of them do one, some of them are just for aroma, and some of them are aroma and they smoke.

LM: Um, can you label it so I know what the difference is?

SM: Sure can. Not a problem.

LM: Okay, well, yeah, it's worth a try.

SM: Okay, you got it. I'll take care of it.

LM: I want it overnight, four hundred fifty dollars worth.

SM: You got it.

LM: Okay.

SM: All right, Lois.

LM: Thank you.

SM: You got t. I'll talk to you later.

LM: Bye.

SM: All right. Bye.

End of call.

APPENDIX O

GOV'T EXH. 71A

11-30-11.txt

November 30, 2011

Frazier: All right. Go ahead.

(Phone ringing)

McFadden: Hello, Lois.

McDaniel: Hey, Steve.

McFadden: What's going on, there?

McDaniel: I got your shipment, and...

McFadden: What's up?

McDaniel: Not, not much. I just wanted to ask you, what's the difference in the two?

McFadden: Ah, which ones did I send you again? I marked 'em. I'm sure I marked 'em.

McDaniel: Ah, PV1-2 and (inaud) or (inaud)

McFadden: (inaud)?

McDaniel: (inaud), yes.

McFadden: Okay. PV1-2, actually both of them you can burn, so it, it's good for both.

McDaniel: Okay.

McFadden: Both of them.

McDaniel: Well...

McFadden: Okay, the one, the one, the (inaud) is a little bit more, um, what do they call it, ah, trippy?

McDaniel: What?

McFadden: Trippy. Trippy. They call it, it's a little more trippy.

McDaniel: Okay.

McFadden: Ah, oh, ah, more, more of a euphoric I believe they use as a word.

McDaniel: Okay.

McFadden: All right? And that's, that's the straight up product, so, you know, you can, you know, actually cut that down, do whatever you want with it, because otherwise, it can be very slow last-, I gotta say, for some people it's not strong at all. For some people, it's, ah, it's just fine...

McDaniel: Okay.

McFadden: ...the way it is. You know, that's the, you know, you know, you know, the hardcore aromatherapy guys.

McDaniel: Okay. Now, um, so anybody that likes the old two, let me see, it was, um, Speed and those two? Are these...

McFadden: The, the, the No Speed, actually, the Hardball that I sent you? That Hardball is creeping close...

McDaniel: Okay.

McFadden: ...to the No Speed Limit.

McDaniel: Okay. Now, would either one of these be close to the Speed Limit or the other two?

McFadden: Ah, you know what? It is probably not as long, wouldn't last as long aroma, but it would be very intense. So, it would be very, very hard hitting at first, but ah, it would be, ah, you know, gone quickly. Maybe forty-five minutes, you know?

McDaniel: Oh, okay.

McFadden: (inaud) in, ah, Hardball gonna keep you going for a while.

McDaniel: Okay. Now, what about, um, the Up and the Alpha?

McFadden: Well, the, the Alpha is, is only good for guys who like the aroma. It's not good for burning it.

McDaniel: Okay. Okay.

McFadden: As far as I know, that's, that's the word I'm getting back. And, ah, it's, it's not, it's not super intense. It's more of a level-headed kind of thing. It, it's, it's a constant aroma.

McDaniel: Okay. Are either of the two an alternative for the, the meth?

McFadden: What's that?

McDaniel: Are either of these two like an alternative for the meth?

McFadden: An alternative for which?

McDaniel: For the meth? The crystal meth?

McFadden: Ah, I, I, I don't, we don't talk about that, you know that.

McDaniel: Okay. I'm sorry. I'm sorry. I just, you know yourself, I'm kind dumbfounded when it comes to this stuff.

McFadden: You know it's just, it, it, it's just, ah, the, the, the closest thing you have to that as an alternative is Hardball for, ah, you know, the guys who, who like a, a good strong aroma and, ah, and like it to last long.

McDaniel: Okay. Okay.

McFadden: All right? The other two, the other two, the other two are really for guys who know what they're doing.

McDaniel: Okay.

McFadden: You know, that, that's when you been doing it for a while. They'll, they'll know exactly what it is once you tell them what it is.

McDaniel: All right. Well, I'll tell you what. In about three weeks when I get some more money in my hands, I'll give you a call. Give...

McFadden: Okay.

McDaniel: ...you know, give or take a few, three weeks.

McFadden: Okay.

McDaniel: Okay?

McFadden: Not a problem, dear.

McDaniel: Thank you.

McFadden: You're very welcome.

McDaniel: All right. Bye.

McFadden: All right. Bye.

Frazier: It's off.

McDaniel: What in the world.

Frazier: It's, ah, 11-30-2011. Time is 16:26 by my watch. I'm here with, ah, Special Agent Ed Orgon and cooperating individual. A call was placed to [redacted]. Um, the CI spoke with Steven McFadden, ah, and discussed, ah, the bulk product that arrived on 11-30-2011 from Fed Ex. Um, end of post-amble.

End of Tape.

APPENDIX P

GOV'T EXH. 72A

1-5-12 N52.txt

January 5, 2012 (N52) Phone call between Steven McFadden (SM) and Lois McDaniel (LM)

Frazier: We got his, ah, ... there, there you go.

(Phone ringing)

SM: Hello, Lois.

LM: Hey, Steve.

SM: How are ya?

LM: I'm all right. I'm ready to make that order.

SM: Oh yeah? What do you need, girl?

LM: I need to spend five hundred dollars.

SM: Okay.

LM: And I need, I need to see if you got anything new.

SM: Oh gosh, the only thing that we have is reworked, we re-worked the, ah, the Hardball. This shit is kicking ass. We've got five active chemicals in it, so it really (inaud) you're gonna love it.

LM: Okay. So, um, Hardball. What else?

SM: Well, I still have the Sheens which is the, not the old one, you know, the new ones.

LM: Okay.

SM: Which is okay, I mean, they're okay, then the (inaud) better, because I got a much better second chemical for it, so...

LM: Okay. All right. All right. What else?

SM: Pretty much that's about it.

LM: All right. Sounds to me like I'm gonna trust you and get you to send me, um, a little bit of each. Send me more of the one you think might sell better.

SM: Okay. So, that would be the Hardball. Hardball's definitely gonna sell better.

LM: Hardball. Okay. And so, the, the Up, which customers gonna want Up?

SM: Actually, they'll all, ah, the, the guys who like ~~something steady and slow~~.

LM: Okay. All right.

SM: The Hardball is, is, is actually more hard core. So, you know?

LM: Well, sounds to me like I'm gonna trust you to send me five hundred dollars worth. You gonna give me shipping and handling free this time?

SM: Yeah, no problem. I'll throw that in for you.

LM: All right.

SM: How ya been? You been busy? Been doing anything? Been doing okay?

LM: Little bit, yeah. Been sick the whole winter. I been sick.

SM: Really?

LM: Yeah.

SM: That's, that's no fun.

LM: No, not really. I'm not used to being sick. Um, can you ship this overnight for me?

SM: Yeah, sure.

LM: 1141 Fifth Street, same as usual.

SM: (inaud)

LM: 1141, uh huh.

SM: Right, that, okay.

LM: All right? Steve...

SM: You got it.

LM: ...do me a favor. Send me some of the, um, baggies like you normally send

SM: Okay, that's not a problem. I actually, I'm pretty well stocked on 'em, so yeah, I'll, I'll send them, no problem.

LM: Okay. All righty. Well, sounds to me like we got a deal and if I don't receive my shipment tomorrow...

SM: Kill me.

LM: ...I'll kill ya. You'll be dead. All right. Thank you.

SM: I got you. No problem.

LM: All right. Bye.

SM: All right. Bye bye.

LM: So, new Up...

Frazier: Yeah.

LM: ...is steady and smooth.

Frazier: Ah, it's Detective Frazier. It's 1-5-2012. Time is 16:56 by my watch. Here with Special Agent Ed Orgon and ah, and a CI. CI placed a recorded phone call to Steve McFadden at [redacted] and ordered five hundred dollars worth of, um, bath salts, ah, three different kinds were requested. End of post-amble.

APPENDIX Q

GOV'T EXH. 73A

2-1-12.txt

February 1, 2012 Phone call between Steven McFadden (SM) and Lois McDaniel (LM)

(Phone ringing)

LM: That's great, Steve. How you doing?

SM: What's going on, Lois?

LM: Oh, you know me. I'd like to make an order.

SM: What do you need?

LM: Um, well, for starters do you have anything new and good?

SM: Ah, I'd say the only thing I did was I upped the Hardball a little bit again because, ah, I picked up some new (inaud), so ah, I, I, I added some more. So there's like five ingredients in there that are pretty kick ass. It works pretty well. Everybody seems to like it.

LM: Okay. Um, all right. So, I'll probably get a little Hardball from ya. Um, the Sheen seems to be doing pretty good.

SM: Could you hold on for just a second?

LM: Yeah.

(Phone ringing)

SM: (inaud)... Yeah... Yes... It's not available in quarts, only in gallons... Ah, sorry, I mean, well, I mean, how much are the kits?... Ah, hold on, I'll tell you in a sec.. Lois, let me call you back in two minutes.

LM: Two minutes. All right.

SM: Yup. All right. Bye.

End of call.

APPENDIX R

EXCERPT OF GOV'T EXH. 86

Re: Shipment From: mykaelsworld <[redacted][1]> To: Rightguy13 <[redacted]> Date: Mon, Jan 16, 2012 1:05 pm Your right maybe my next order I'LL see what they think of hardball. I think in my 1st order you sent that n winning. They were both good. Email your phone number please I didn't store it in my phone. Thanks Sent via my Samsung Galaxy Prevail from Boost Mobile [redacted] wrote: >Why don't you guys order 50 pcs at a time? 999.00 overnight shipping >included, or 100 pcs for 1700.00. > Also I sent you 2 jars of Hardball Aromatherapy to see if you can move >that too. > >Thank you> > >In a message dated 1/16/2012 10:42:36 A.M. Eastern Standard Time, >[redacted] writes: > >Ok so I'll receive it tomorrow? > >Sent via my Samsung Galaxy Prevail from Boost Mobile> >[redacted] wrote: > >>Sure thing. >> >> >>In a message dated 1/16/2012 9:44:48 A.M. Eastern Standard Time, >>[redacted] writes: >> >>Hi its Mauri from mykaelsworld ??Can you overnight my order? >> >>Sent via my Sam sung Galaxy Prevail from Boost Mobile>

* * *

[1] Email addresses redacted.

Re: Ioffer Seller Rightguy1327 – Dragon Bath Salts and More From: Rick Graham <[redacted]> To: Rightguy13 <[redacted]> Date: Mon, Jan 16, 2012 3:27 pm Can you give me an email address to use with paypal? On Mon, Jan 16, 2012 at 12:19 PM, Rick Graham <ricktgraham@gmail.com> wrote: Something is not working right (maybe me?!) I included a reference to your email and was proceeding to pay but don't think it worked as I didn't have to enter any c/c info. I'll keep poking around... it brings up the order with an option to re-order. On Mon, Jan 16, 2012 at 12:02 PM, <[redacted]> wrote: Rick, Nahhhh, you don't bug me... just was overwhelmed the last 2 weeks. Place the order on our site. www.herbalsolutions.mybigcommerce.com Its under the Green Valley Oils with the Hardball Aromatherapy... trying to put some shade on it. Thanks Steve In a message dated 1/16/2012 3:00:06 P.M. Eastern Standard Time, [redacted] writes: Sounds fair, I'll place the order online later. Thanks bud, I thought maybe you got sick of me bugging you! Cheers, Rick Sent from my iPhone, sorry for any typos... I'm driving. On Jan 16, 2012, at 11:03 AM, [redacted] wrote: Sorry I completely missed this message. How about 4 grams of Hardball for $100? Thanks In a message dated 1/9/2012 6:16:49 P.M. Eastern Standard Time, [redacted] writes: Sorry to keep bugging you! The hardball says 34 for 500mg and the dragon says 1g for 50 which makes it cheaper than hardball... unless I'm mis-reading it. I'm just the kind of guy who appreciates a deal! So, whats the best deal for a hundred? On Mon, Jan 9, 2012 at 11:13 AM, <[redacted]> wrote: look at green valley oils,

it's a front for the hardball In a message dated 1/9/2012 1:59:20 P.M. Eastern Standard Time, [redacted] writes: I only se bulk size orders for it...? On Mon, Jan 9, 2012 at 10:26 AM, <[redacted]> wrote: Hardball aromatherapy, it's on the site. Actually its stronger and comes in 500 mg containers. Really kind of works out to about the same price. I don't produce Dragon so I pay more for it. The ones I produce are much stronger than Dragon. I will be coming up with some new product very soon. Thanks In a message dated 1/9/2012 12:38:29 P.M. Eastern Standard Time, [redacted] writes: Will do, thanks. Is there a similar product I could get a deal on? Say 2.5-3 for a hun? On Mon, Jan 9, 2012 at 7:52 AM, <[redacted]> wrote: Rick, Not a problem. Can you post the order on our site? www.herbalsolutions.mybigcommerce.com Just don't want to forget it and be able to track it. Also put the payment information in the comments section on the order. Thanks Steve In a message dated 1/9/2012 10:30:49 A.M. Eastern Standard Time, [redacted] writes: $100 incl shipping for 2g? On Mon, Jan 9, 2012 at 7:24 AM, <[redacted]> wrote: Rick, How much are you looking for? It's pretty much readily available. Thanks Steve In a message date 1/8/2012 6:46:57 P.M. Eastern Standard Time, [redacted] writes: Hey Steve, any good deals on DRAGON? On Tue, Aug 2, 2011 at 9:59 AM, <[redacted]> wrote: Rick, I have opened my own site now with a longer list of products and since I won't be giving Ioffer a cut I can work better deals out. Check my site www.herbalsolutions.mybigcommerce.com After you join the site email me and I'll give you a $5 store credit. I'll be posting more items on the site over the

next few days. My best seller lately is Sheen's Winning Aromatherapy. Feel free to contact me if you need any more information. Thanks Steve

No. 14-378

IN THE

Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN,

Petitioner,

v.

UNITED STATES OF AMERICA,

Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF FOR THE PETITIONER

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QUESTION PRESENTED

Whether, to convict a defendant of distribution of a controlled substance analogue, the government must prove that the defendant knew that the substance constituted a controlled substance analogue.

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BRIEF FOR THE PETITIONER

Petitioner Stephen Dominick McFadden respectfully requests that this Court reverse the judgment of the United States Court of Appeals for the Fourth Circuit.

OPINIONS BELOW

The opinion of the United States Court of Appeals for the Fourth Circuit (Pet. App. 1a-27a) is published at 753 F.3d 432. The district court's opinion (Pet. App. 44a-68a) is unpublished, but available at 2013 WL 8339005.

JURISDICTION

The judgment of the court of appeals was entered on May 21, 2014. Pet. App. 1a. The court of appeals denied petitioner's timely petition for rehearing en banc on June 17, 2014. Pet. App. 69a. On August 21, 2014, the Chief Justice extended the time to file this petition through October 14, 2014. No. 14A199. A petition was filed on October 2, 2014. This Court granted certiorari on January 16, 2015. This Court has jurisdiction pursuant to 28 U.S.C. § 1254(1).

RELEVANT STATUTORY PROVISIONS

Section 841(a) of Title 21 provides in relevant part:

(a) Unlawful acts

Except as authorized by this subchapter, it shall be unlawful for any person knowingly or intentionally –

(1) to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense, a controlled substance

Section 813 of Title 21 provides:

A controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I.

Section 802(32) of Title 21 provides:

(A) Except as provided in subparagraph (C), the term "controlled substance analogue" means a substance –

(i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;

(ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or

(iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

(B) The designation of gamma butyrolactone or any other chemical as a listed chemical pursuant to paragraph (34) or (35) does not preclude a finding pursuant to subparagraph (A) of this paragraph that the chemical is a controlled substance analogue.

(C) Such term does not include –

(i) a controlled substance;

(ii) any substance for which there is an approved new drug application;

(iii) with respect to a particular person any substance, if an exemption is in effect for investigational use, for that person, under section 355 of this title to the extent conduct with respect to such substance is pursuant to such exemption; or

(iv) any substance to the extent not intended for human consumption before such an exemption takes effect with respect to that substance.

STATEMENT OF THE CASE

Americans consume all manner of products advertised as boosting energy, relieving stress, or having other desired effects on the user's mind and body. Some – including dietary supplements, energy drinks, homeopathic remedies, and aromatherapy products – are subject to only minimal regulation by the federal government. Others are strictly illegal, banned as controlled substances by federal law.

Most of the time, it is easy enough to determine which is which: the Government issues schedules of controlled substances and makes them available on the internet. But federal law also criminalizes "knowing or intentional" possession and distribution of controlled substance "analogues,"[1] defined to include substances that are "substantially similar" in chemical structure and effect to certain scheduled controlled substances.[2] Given this definition, simply knowing that a dietary supplement or energy drink contains "thiamine hydrochloride," "didehydroepiandrosterone," or "phenethylamine" tells the ordinary person next to nothing about its legality.[3] When the Government wants to know

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[1] *See* 21 U.S.C. §§ 813, 841(a), 844.

[2] *See id.* § 802(32)(A).

[3] Thiamine hydrochloride is a common and entirely legal food additive. Didehydroepiandrosterone is a legal nutritional supplement. Phenethylamine is a substance the Government has alleged to be an analogue in a handful of prosecutions, *see, e.g.*, *McKinney v. United States*, 221 F.3d 1343 (8th Cir. 2000) (unpublished table decision), but which its expert in this case testified is not an analogue, *see* C.A. J.A. 424.

whether something is an analogue, it asks a team of scientists at the Drug Enforcement Agency (DEA). While the DEA maintains a running list of what it considers to be analogues, it keeps that list a secret. *See* J.A. 58.

The question in this case is whether someone who is *not* a scientist, and who genuinely does not know that the DEA considers a product he is distributing to meet the statutory definition of an analogue, has committed a federal drug felony. The Fourth Circuit held that he has, so long as he intended his products for human consumption.

I. Legal Background

The Controlled Substances Act (CSA), criminalizes "knowingly or intentionally" possessing, manufacturing, distributing, or dispensing "a controlled substance." 21 U.S.C. §§ 841(a), 844 The statute defines a "controlled substance" as a substance listed on schedules described in the statute, as those schedules may be amended by the Attorney General through notice-and-comment rulemaking. *See* 21 U.S.C. §§ 802(6), 811-812. To prove a criminal violation, the Government must show that the defendant knew that the substance he possessed or sold was a controlled substance. *See, e.g.*, *United States v. Turcotte*, 405 F.3d 515, 525 (7th Cir. 2005) (collecting citations). Illegal distribution of a schedule I controlled substance is punishable by up to twenty years' imprisonment (or, if death or substantial bodily injury results, a mandatory minimum sentence of twenty years and up to life imprisonment). *Id.* § 841(b)(1)(C).

It is not difficult for someone to determine whether a particular substance is a controlled

substance. The controlled substance schedules are published in the Code of Federal Regulations and available on the DEA's website. *See* 21 C.F.R. §§ 1308.11-1308.15; Office of Diversion Control, Drug Enforcement Admin., *Lists of: Scheduling Actions[,] Controlled Substances[,] Regulated Chemicals* (2014), *available at* http://www.deadiversion.usdoj.gov/schedules/orangebook/orangebook.pdf.

In 1984, Congress became concerned about the emergence of so-called "designer drugs," created by clandestine chemists to mimic the effect of controlled substances while evading the Controlled Substances Act. *See Touby v. United States*, 500 U.S. 160, 163 (1991). In response, Congress gave the Attorney General emergency authority to add new substances to schedule I on an expedited basis whenever he finds that doing so "is necessary to avoid an imminent hazard to the public safety." 21 U.S.C. § 811(h)(1).

While the Attorney General's emergency scheduling authority proved "very effective[] to address much of the designer drug problem," the DEA "found a very small number of illicit chemists have been very carefully developing new drugs to stay ahead of DEA's scheduling actions." H.R. Rep. No. 99-848, pt.1, at 4-5 (1986) (House Report). To permit the Government to "investigate and prosecute these chemists for their new discoveries prior to formal control of the drugs," *id.* at 5, Congress enacted the Controlled Substance Analogue Enforcement Act of 1986 (Analogue Act), Pub. L. No. 99-570, tit. I, § 1202, 100 Stat. 3207-13.

The new statute provided that a "controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of

any Federal law as a controlled substance in schedule I." 21 U.S.C. § 813. As relevant here, a "controlled substance analogue" is defined as a substance:

> (i) the chemical structure of which is *substantially similar* to the chemical structure of a controlled substance in schedule I or II;
>
> (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is *substantially similar* to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or
>
> (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is *substantially similar* to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. § 802(32)(A) (emphasis added).[4]

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[4] The definition also sets out certain exclusions that are not relevant to this case. *See* 21 U.S.C. § 802(32)(B)-(C). Although the statute is confusingly worded, the "vast majority of federal courts" construe it to require the government to satisfy subsection (i) *and* either subsection (ii) or (iii). Pet. App. 47a n.2 (quoting *Turcotte*, 405 U.S. at 522 (collecting citations)) (internal quotation marks omitted).

The statute contains no definition of "substantially similar." Nor did Congress require the DEA to issue regulations elaborating the statutory definition or to compile a list of what the agency believed to fall within the definition of an analogue. And, in fact, although the DEA maintains such a list, it keeps the list confidential. *See* J.A. 58; *United States v. Nashash*, No. 12-CR-778, 2014 WL 169743 (S.D.N.Y. Jan. 15, 2014) (Government claimed privilege against disclosure of DEA documentation regarding analogue determinations).

Thus, a "substance's legal status as a controlled substance analogue is not a fact that a defendant can know conclusively *ex ante*; it is a fact that the jury must find at trial." *United States v. Turcotte*, 405 F.3d 515, 526 (7th Cir. 2005). Generally, to decide whether something is "substantially similar" to a scheduled controlled substance, juries must resolve the conflicting claims of expert witnesses on complex matters of scientific methodology, chemistry, and biology. *See, e.g., United States v. Brown*, 415 F.3d 1257, 1261-63 (11th Cir. 2005) (describing relevant testimony in one trial).

Because a substance's status as an analogue is a question of fact under the statute, a jury's decision whether a substance is an analogue is binding authority for that case and that case alone. Which is to say, it is binding only on the *defendant*: a determination that a particular substance is *not* an analogue does not bar the Government in future cases from prosecuting others for possessing or selling the product.

II. Factual And Procedural Background

1. In 2007, petitioner, an employee of a construction company, began operating a small business on the side buying overstocked items and reselling them on the internet. *See* C.A. J.A. 634, 814, 842.[5] In early 2011, he noticed that a variety of businesses in his Staten Island neighborhood were openly selling products referred to as "bath salts" which, when burned as aroma therapy products, had a stimulant effect. *See id.* 633-37, 842-44.

The term "bath salts" is used loosely to describe a range of products containing a varying list of compounds.[6] Until the DEA exercised its emergency scheduling authority in 2011, the most common ingredients were not included on federal controlled substances schedules. *See* Pet. App. 6a n.2, 45a n.1. Even after that action, some products marketed as bath salts contained active ingredients that were not scheduled controlled substances. *See id.* 6a & n.2.

Prior to selling bath salts himself, petitioner investigated the legal status of the particular substances he intended to market. On the advice of his brother, a Federal Immigration and Customs

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[5] Because the trial transcript is not consecutively paginated, this brief will refer to the transcript by reference to the page numbers in the Joint Appendix filed with the court of appeals and available on Pacer at Docket No. 19.

[6] *See, e.g.*, Melanie Haiken, *'Bath Salts' a Deadly New Drug with a Deceptively Innocent Name*, Forbes (June 4, 2012, 4:13 PM), http://www.forbes.com/sites/melaniehaiken/2012/06/04/bath-salts-a-deadly-new-drug-with-a-deceptively-innocent-name/.

Enforcement officer, petitioner examined the list of controlled substances on the DEA's website. *See* C.A. J.A. 633, 635, 638-39, 844-46. Finding nothing to indicate that the substances he intended to sell were illegal, petitioner began selling several varieties of bath salt mixtures containing various ingredients. *See id.* 634-39, 846-47. When the Government later listed two of the compounds in some of his products on the controlled substances schedule, petitioner flushed his supply of the affected products down the toilet. *See id.* 640-41. When an undercover DEA agent subsequently attempted to purchase the banned substances from him, petitioner refused on the ground that they were illegal. *See id.* 847-50.

2. Nevertheless, in November 2012, a grand jury indicted petitioner for distributing, and conspiring to distribute, products containing 4-methylethyl-cathinone, 3,4-methylenedioxypyro-valerone, and/or 3,4-methylenedioxymethcathinone. Pet. App 5a-6a. During the relevant time periods, none of these substances was listed as a controlled substance. *Id.* 6a n.2, 45a & n.1. The Government nonetheless insisted that these compounds were substantially similar to controlled substances, and therefore that petitioner had committed a criminal violation of the Analogue Act.

The ensuing "four-day jury trial focused primarily on the issue [of] whether" the chemicals at issue "constitute[d] controlled substance analogues." Pet. App. 7a. The jury heard from competing expert witnesses, including a chemist, a drug science specialist, and a pharmacist. *Id.* 7a-8a. The testimony was complex. For example, the Government called Dr. Thomas DiBerardino, a DEA

chemist, as an expert witness to establish the structural similarity of 3,4-methylenedioxypyrovalerone ("MDPV" for short) to methcathinone (a controlled substance). Dr. DiBerardino stated that he began his analysis by observing that the "core chemical structure" of the alleged analogue was phenethylamine. C.A. J.A. 422. Some controlled substances, including methcathinone, have a phenethylamine core. *Id.* 423-24. But that, he acknowledged, was not proof that MDPV is an analogue. "Phenethylamine in itself is not controlled," he explained. *Id.* 424. And there are "probably thousands of compounds that share that core, but that does not make them analogues." *Id.* 453; *see also id.* 452 (giving example of sassafras, used to flavor root beer); *id.* 456 ("decongestants" and "weight loss drugs").

Dr. DiBerardino then attempted to explain why he thought that the "substitutions" made to the phenethylamine core molecule by the alleged analogue MDPV were more similar to the substitutions required to make methcathinone than to the kinds of substitutions that would create a perfectly lawful chemical:

> Now, see, MDPV, this compound has the same core chemical structure. I don't want to – I'm not trying to confuse anybody here, but I need to say that it reflects what's in the schedules. That is, it's substituted what we call alkyl groups. They're a certain kind of chemical moiety. It's also substituted what we call ethers, another type of chemical moiety. Those are found throughout the Controlled Substances Act, those kind of

> substitutions, on this particular core. So there is remnants of what's controlled and these additions or subtractions, whatever you have, are reflective of what's controlled.

C.A. J.A. 426-27. In contrast, he testified, he would be "very uncomfortable in calling this an analogue" if a substance "add[ed] an extra carbon atom between the ring and the nitrogen," *id.* 431, or if the changes had involved "aromatic" rather than "alkyl groups," *id.* 432.

Under cross-examination, Dr. DiBerardino admitted that the critical distinction he drew between substitutions involving alkyl groups and aromatic groups was "not found in the statute." *Id.* 454. Moreover, he acknowledged that there is no "scientifically commonly understood definition [of] substantially similar." *Id.* 455.

Petitioner's expert, Dr. Matthew Lee, agreed that there is no "medical or scientific definition of substantially similar." *Id.* 523-24. Saying that a change between two chemicals is "minor" or "substantial" does not "mean anything in science," in part because there are many *aspects* in which chemical structures may be similar or different. *Id.* 524. Nor is there any consensus on a methodology for making such comparisons, he explained. For example, Dr. DiBerardino elected to compare molecular structure using two-dimensional schematics. *Id.* 525. But that, Dr. Lee noted, is "the equivalent of taking an orange and superimposing it on a frisbee" then claiming them to be substantially similar in structure because they both form circles. *Id.* 525. And it ignores the critical effects a molecule's

three-dimensional shape may have on the human body. *Id.* 525-26.[7]

Of course, prior to trial petitioner was unaware of any of this. In the end, the Government presented no evidence that petitioner knew the chemical structure – in two or three dimensions – of any of the ingredients in the products he was selling. Nor did it claim that petitioner, an employee in a construction company, had the experience or training to know which differences in chemical structure were material, much less whether, in light of those differences, his products were "substantially similar" to a controlled substance. Instead, the most the Government was able to show was that petitioner had, in a series of recorded telephone calls with a DEA informant and emails with others, compared the *effect* of his mixtures to methamphetamine or cocaine, without making any representations regarding their chemical structure. J.A. 60-96.[8]

At the close of evidence, the district court rejected petitioner's request that the jury be instructed that the Government was required to

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[7] There also was disagreement between the experts regarding the methodology for evaluating substantial similarity in pharmacological effect. *See, e.g.*, C.A. J.A. 530-33 (Dr. Lee's criticism of DEA expert's use of "structure activity relationship analysis" to predict (rather than determine) that one of the alleged analogues would have a substantially similar effect to a controlled substance).

[8] Notably, in none of the calls did petitioner represent that the purported effects were caused by the inclusion in the mixture of the substances charged in the indictment (as opposed to other active ingredients in the mixtures). *See* J.A. 60-96.

prove that petitioner knew, or was willfully blind to the fact, that the substances he distributed were analogues – *i.e*, that they had a chemical structure and an actual, intended, or claimed effect substantially similar to a schedule I or II controlled substance. *See* J.A. 30-31. Instead, over petitioner's objection, the court gave a jury instruction under which the only state of mind requirement relating to the nature of the substance was that petitioner "intended for the mixture or substance to be consumed by humans." *Id.* 40.[9] The jury convicted and petitioner appealed. Pet. App. 2a, 46a.

3. The Fourth Circuit affirmed. Pet. App. 2a. The court concluded that under its prior decision in *United States v. Klecker*, 348 F.3d 69 (4th Cir. 2003),

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[9] Specifically, the court instructed the jury that it must find:

> FIRST: That the defendant knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act;
>
> SECOND: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act; AND
>
> THIRD: That the defendant intended for the mixture or substance to be consumed by humans.

J.A. 40. The court gave a materially identical instruction in the conspiracy charge. *See id.* 33-34.

the only "scienter requirement" for an Analogue Act conviction is "that the defendant intended that the substance at issue be consumed by humans." *Id.* 21a-22a. As a consequence, the court reaffirmed, "the Act may be applied to a defendant who lacks actual notice that the substance at issue could be a controlled substance analogue." *Id.*[10]

4. The Fourth Circuit subsequently denied a timely petition for rehearing. Pet. App. 69a.

5. This Court granted certiorari.

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[10] The court also rejected petitioner's other claims on appeal, including his argument that the statute was unconstitutionally vague as applied to him in this case. Pet. App. 9a-16a.

SUMMARY OF ARGUMENT

I. The district court erred in instructing the jury that the only mens rea required for a criminal violation of the Analogue Act is an intent that the alleged analogue be consumed by humans.

The Analogue Act declares that "a controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I." 21 U.S.C. § 813. Federal law, in turn, criminalizes "knowingly or intentionally" possessing or distributing controlled substances. *Id.* §§ 841(a), 844. It is uniformly accepted that this means that someone prosecuted for selling methamphetamines must have known he was selling (or intended to sell) a controlled substance. It follows that when the Government charges instead that the defendant was selling a methamphetamine analogue, the Government must prove that the defendant knew he was selling (or intended to sell) a controlled substance analogue.

The Fourth Circuit's contrary conclusion flies in the face of the text and runs counter to tradition. Courts are reluctant to construe a statute to establish a strict liability crime. They presume instead that a statute (particularly a statute with an express mens rea element) requires the prosecution to establish that the defendant knew the facts that made his conduct illegal. Yet the Fourth Circuit's interpretation requires no such knowledge and effectively reads the Analogue Act to create a strict liability offense.

The Government's principal objection to a traditional construction of the Analogue Act is

practical – such a reading allegedly would make it too hard to convict everyone the Government would like to prosecute under the statute. But the Government itself emphasizes that the principal focus of the statute was the clandestine chemists who design analogues. And it does not deny that it can easily establish that these chemists know that their drugs are substantially similar to controlled substances, since that is the whole point of creating them.

So the Government is reduced to objecting that it may be difficult to show that someone like petitioner knows that what he is selling is substantially similar to a controlled substance. But the Government routinely convicts "street-level dealers" in jurisdictions requiring mens rea. Moreover, there are a number of simple steps the Government can take to enhance public safety and facilitate prosecutions. For example, when the Government encounters someone like petitioner openly selling a product on the internet or in a store, it can immediately inform him that the substance is an analogue, seize the entire stock of the product (since the drug forfeiture statute has no mens rea element), and then prosecute the person if he tries to sell the substance again (at which point the jury can easily infer the defendant's knowledge).

II. The district court further erred in refusing to give petitioner's proposed instruction on what it means to knowingly or intentionally distribute an analogue.

Under a "conventional mens rea" requirement, to knowingly or intentionally possess or distribute an illegal object, the defendant "must know the facts that make his conduct illegal." *Staples v. United*

States, 511 U.S. 600, 619 (1994). For example, a defendant knowingly owns a "machine gun" only if he knows that the rifle he purchased has the features required by the statutory definition of that term (*e.g.*, fires multiple rounds on a single pull of the trigger). He does not knowingly own a machine gun if he simply knows he owns a rifle, but honestly thinks it fires a single round per trigger pull. *Id.* at 615, 619.

Likewise, the conventional mens rea element incorporated by the Analogue Act requires that the defendant must know that the substance he is possessing or distributing has the characteristics that make it an analogue under the statutory definition – *i.e.*, that it is substantially similar in structure and effect to a controlled substance.

III. Absent such a mens rea element, the Analogue Act would be unconstitutionally vague as applied to petitioner and others like him.

The Due Process Clause requires Congress to define criminal conduct in a way that permits ordinary citizens to know their legal obligations and conform their conduct to the law. But the Analogue Act's "substantially similar" standard makes that all but impossible for someone like petitioner. First, it defines criminal conduct by reference to information (*e.g.*, the structure and effect of chemicals) that is inaccessible to ordinary people. Second, even if someone can figure out the chemical structure and effect of an alleged analogue, he is left to guess whether the inevitable combination of similarities and differences amount to substantial similarity under the Act. Nothing in the statute, regulations, common law, or any other legal source provides the answer. Nor does the term have any established

meaning in science. As a consequence, even scientists – including scientists within the DEA itself – regularly disagree about how to evaluate alleged analogues and whether particular substances meet the vague statutory definition.

The result is uncertainty and arbitrariness. The only way to know for certain whether a particular substance is an illegal analogue is to get prosecuted for selling it and then see how a jury resolves the inevitable battle of scientific experts (whose testimony the jury may not even be able to understand). And even that will not provide any guidance for the future, as the jury's verdict has no binding effect in later prosecutions.

The only hope for salvaging the statute is by limiting its application to those defendants – like clandestine chemists – who despite these odds actually know (or are willfully blind to the fact) that they are making, possessing, or selling a product that is substantially similar to a controlled substance in chemical structure and effect. Imposing that mens rea requirement allows conviction of those for whom the statute is not impermissibly vague while precluding its application to those denied fair notice of what the law prohibits.

ARGUMENT

I. To Obtain A Criminal Conviction Under The Analogue Act, The Government Must Prove The Defendant Knew The Substance He Possessed Or Distributed Was A Controlled Substance Analogue.

On the Fourth Circuit's interpretation of the Analogue Act, one need know nothing about the content of a substance before being subject to up to 20 years imprisonment for selling what turns out to be a controlled substance analogue. All the Government must prove is that the defendant intended the product containing the alleged analogue to be consumed by another person. Pet. App. 21a. Thus, someone who sells dietary supplements from her home is rendered a federal drug trafficking felon if her supplier includes in the pills even small amounts of what a jury subsequently decides is an analogue. Indeed, the customer who purchases them could be prosecuted for possession of a schedule I controlled substance. *See* 21 U.S.C. § 844. The same would be true of a party host who unwittingly serves punch someone else spiked with an ecstasy analogue, and the guests who consume it.

Of course, one might hope prosecutors would exercise reasonable judgment before bringing such charges (although such hope can sometimes lead to disappointment, *see, e.g.*, *Bond v. United States*, 134 S. Ct. 2077, 2085 (2014)). But this Court does not lightly conclude that Congress intended to leave the populace to the mercy of prosecutors' discretion by omitting any meaningful mens rea element from a criminal statute. And here the text demonstrates that Congress intended the Analogue Act to

incorporate the traditional mens rea requirement expressly imposed in ordinary controlled substance cases – *i.e.*, that the Government must prove the defendant knew that the substance he sold or possessed was a controlled substance analogue.

A. The Plain Text Of The Analogue Act Requires The Government To Prove The Defendant Knew He Was Possessing Or Distributing An Analogue.

1. The Analogue Act itself does not directly criminalize anything. Instead, it defines a "controlled substance analogue," 21 U.S.C. § 802(32), and then directs that analogues "shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I," *id.* § 813.

Federal law, in turn, does not criminalize all possession or sale of schedule I controlled substances. Instead, the relevant provisions declare that it "shall be unlawful for any person *knowingly or intentionally* to possess a controlled substance," *id.* § 844(a) (emphasis added), or "*knowingly or intentionally* to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense, a controlled substance," *id.* §841(a) (emphasis added).

Both before and after the Analogue Act was passed, it was settled that to knowingly or intentionally distribute a controlled substance like cocaine, the defendant "must know that the substance in question is a controlled substance," that

is, that the substance "was some kind of prohibited drug." *United States v. Turcotte*, 405 F.3d 515, 525 (7th Cir. 2005).[11]

That settled authority is correct. "As a matter of ordinary English grammar, it seems natural to read the statute's word 'knowingly' as applying to all the subsequently listed elements of the crime." *Flores-Figueroa v. United States*, 556 U.S. 646, 650 (2009). This is particularly true with respect to a provision, like this one, which criminalizes possession of a particular kind of object. "In ordinary English," the Court has explained, "where a transitive verb has an object, listeners in most contexts assume that an

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[11] *See, e.g.*, *United States v. Hussein*, 351 F.3d 9, 19-20 (1st Cir. 2003); *United States v. Kairouz*, 751 F.2d 467, 469 (1st Cir. 1985); *United States v. Roberts*, 363 F.3d 118, 123 & n.1 (2d Cir. 2004); *United States v. Morales*, 577 F.2d 769, 775-76 (2d Cir. 1978); *United States v. Barbosa*, 271 F.3d 438, 458 (3d Cir. 2001); *United States v. Ali*, 735 F.3d 176, 186-87 (4th Cir. 2013); *United States v. Gamez-Gonzalez*, 319 F.3d 695, 699-700 (5th Cir. 2003); *United States v. Gonzalez*, 700 F.2d 196, 200 (5th Cir. 1983); *United States v. Pope*, 561 F.2d 663, 670 (6th Cir. 1977); *United States v. Serrano-Lopez*, 366 F.3d 628, 634 (8th Cir. 2004); *United States v. Ramirez-Ramirez*, 875 F.2d 772, 774 (9th Cir. 1989); *United States v. Jewell*, 532 F.2d 697, 698 (9th Cir. 1976) (en banc); *United States v. Castorena-Jaime*, 285 F.3d 916, 933 (10th Cir. 2002); *United States v. Lewis*, 676 F.2d 508, 512 (11th Cir. 1982).

Under this standard, it is not necessary that the defendant "know the *type* of controlled substance he possesses." *Turcotte*, 405 F.3d at 525 (emphasis added) (citation omitted). But he must know that the substance he possesses is *a* controlled substance. *Id.* So someone who believes he is selling ecstasy, but is really selling methamphetamines, nonetheless has the required mens rea.

adverb (such as knowingly) that modifies the transitive verb tells the listener how the subject performed the entire action, including the object as set forth in the sentence." *Id.* Thus, a statute that prohibits knowing possession of the "means of identification of another person" requires the Government to prove that the defendant not only intentionally possessed *something*, but that he knew that the thing was a means of identification and that it belonged to another person. *Id.* at 657.

For the same reason, to prosecute someone for knowingly or intentionally distributing a controlled substance, the Government must prove that the defendant knew that her dietary supplement or party beverage contained a controlled substance. And if analogues are to be treated "as a controlled substance," 21 U.S.C. § 813, the same must be true if the supplement or beverage contains a controlled substance *analogue*. That is, the Government must show that the defendant knew he was selling a controlled substance analogue.

2. The Fourth Circuit's and the Government's contrary interpretations of the text are unconvincing.

a. In *United States v. Klecker*, 348 F.3d 69 (4th Cir. 2003), the Fourth Circuit pointed out that Section 813 contains a mental state requirement, treating analogues as controlled substances only to the extent intended for human consumption. *Id.* at 71. The court seemingly concluded from that fact that Congress meant to relieve the Government of the burden of proving anything else about the defendant's mental state regarding the nature of the substance. *Id.* at 72; Pet. App. 21a.

But that does not follow. Criminal statutes frequently impose mens rea requirements with respect to multiple elements. *See, e.g.*, *Flores-Figueroa*, 556 U.S. at 654; *Staples v. United States*, 511 U.S. 600, 609 (1994). Here, intent for human consumption is simply a requirement for an analogue to be treated as a controlled substance; it says nothing about the mental state required to make possession or sale of analogues or controlled substances illegal. That is addressed elsewhere, in provisions that impose additional intent requirements.

Any contrary inference is decisively rebutted by the plain text of Section 813. Excusing the Government from proving that the defendant knew the nature of the illegal substance he was selling if the substance is an analogue, but not if it is a scheduled controlled substance, would be the opposite of treating analogues "as a controlled substance in schedule I." 21 U.S.C. § 813.

The legislative history confirms that the "intended for human consumption" element was added "to protect legitimate scientific research," not to ease prosecutions. S. Rep. No. 99-196, at 4 (1985) (Senate Report). The requirement makes absolutely clear that the statute is inapplicable to "chemists whose laboratory activity is directed solely toward producing industrial chemicals," *id.*, or those engaged in early stage drug research prior to obtaining FDA approval for clinical trials on humans, House Report at 8.

b. The Government, for its part, has argued that a "[d]irect and literal application of the scienter requirement" of Section 841 to analogue cases would

be "nonsensical." BIO 12-13 (citation and internal quotation marks omitted). That is, "applying the standard requirement that a defendant must know the substance in question is a 'controlled substance' is nonsensical since controlled substance analogues are, by definition, not 'controlled substances.'" *Id.* (quoting *Turcotte*, 405 F.3d at 72) (internal quotation marks omitted).

That argument is itself pure nonsense. Congress obviously intended that analogues be treated as controlled substances in the sense that wherever the statute refers to "controlled substance" it must be understood also to refer to analogues. Or, put another way, Congress directed that analogues be treated as falling within the definition of a "controlled substance." Thus, in an analogue case, the Government proves that a defendant knew he was selling a controlled substance by proving that he knew he was selling a controlled substance analogue.

It is the Government's contrary reading that would render the Analogue Act incoherent. If the Solicitor General is right that an analogue is not a "controlled substance" for purposes of Section 841's mens rea requirement, it follows that an analogue is not a controlled substance for purposes of criminalizing its possession or distribution either. And that would mean that the Analogue Act failed to accomplish anything at all.

B. The Text Is Reinforced By Legal Tradition.

A straightforward reading of the text also aligns the statute with the legal traditions against which it was drafted.

1. Courts "must construe [a] statute in light of the background rules of the common law, in which the requirement of some *mens rea* for a crime is firmly embedded." *Staples*, 511 U.S. at 605 (citation omitted). Accordingly, courts have a "generally inhospitable attitude" to claims that a statute has dispensed with any meaningful mens rea element. *United States v. U.S. Gypsum Co.*, 438 U.S. 422, 438 (1978).

Thus, even when a statute is silent as to mens rea, in the absence of convincing evidence Congress intended to create a strict liability crime, courts will read into the statute such mens rea element as "is necessary to separate wrongful conduct from 'otherwise innocent conduct.'" *Carter v. United States*, 530 U.S. 225, 269 (2000) (citation omitted). Ordinarily that means implying a "conventional mens rea element," which "require[s] that the defendant know the facts that make his conduct illegal." *Staples*, 511 U.S. at 605; *see also id.* at 619 (applying the "usual presumption" that "a defendant must know the facts that make his conduct illegal").

Moreover, when a statute *does* contain an express mens rea requirement, it is presumed to apply to all the factual elements of the offense. *See, e.g.*, *Flores-Figueroa*, 556 U.S. at 650 ("[C]ourts ordinarily read a phrase in a criminal statute that introduces the elements of a crime with the word 'knowingly' as applying that word to each element."); *id.* at 660 (Alito, J., concurring in part and concurring in the judgment) ("In interpreting a criminal statute such as the one before us, I think it is fair to begin

with a general presumption that the specified *mens rea* applies to all the elements of an offense. ").[12] Thus, like a statute with an implied mens rea element, a statute that expressly criminalizes only knowing conduct requires the Government to prove that the defendant "must have had knowledge of the facts, though not necessarily the law, that made" his conduct illegal. *Morissette v. United States*, 342 U.S. 246, 271 (1952); *see also Dixon v. United States*, 548 U.S. 1, 5 (2006); *Bryan v. United States*, 524 U.S. 184, 193 (1998); *Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon*, 515 U.S. 687, 722 (1995) (Scalia, J., dissenting); *United States v. Intn'l Minerals & Chem. Corp.*, 402 U.S. 558, 560, 563-64 (1972); *Boyce Motor Lines, Inc. v. United States*, 342 U.S. 337, 342 (1952)

Finally, Congress enacted the statute against the background principle that "ambiguity concerning the ambit of criminal statutes should be resolved in favor of lenity." *Cleveland v. United States*, 531 U.S. 12, 25 (2000).

2. The Fourth Circuit's interpretation runs against the grain of all of these traditions. It declines to extend Section 844(a)'s express mens rea element to the essential fact – the nature of the substance – that makes the defendant's conduct unlawful. And in

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[12] *Accord* Model Penal Code § 2.02(4) (1981) ("When the law defining an offense prescribes the kind of culpability that is sufficient for the commission of an offense, without distinguishing among the material elements thereof, such provision shall apply to all the material elements of the offense, unless a contrary purpose plainly appears.").

the process, it effectively renders Analogue Act violations strict liability crimes.

To be sure, the court retained a stub of a mens rea element in its "intended for human consumption" requirement. But this Court has applied the presumption against strict liability statutes in similar circumstances. *See Staples*, 511 U.S. at 607 (applying presumption to reject reading of gun control statute that would have required only that the defendant knew he possessed a gun, but not that the gun possessed the features required to make its possession illegal); *id.* at 607 n.3 (collecting other examples of presumption being applied to statutes with nominal, but unconstraining, mens rea elements).

The Fourth Circuit pointed to nothing in the statute sufficient to overcome these traditional presumptions or the rule of lenity. Any assertion that Congress intended no meaningful mens rea element is particularly unpersuasive given that Congress expressly included a conventional mens rea element for ordinary controlled substances and commanded that analogues be treated the same.[13] The Fourth Circuit does not even speculate why

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[13] For that reason, the Analogue Act is distinguishable from the drug-related tax statute the Court considered in *United States v. Balint*, 258 U.S. 250 (1922). In that case, this Court construed a law without an express mens rea element to establish a strict liability "public welfare offense." *Id.* at 252-54. In addition to having an express mens rea requirement, the harsh penalties applied to analogue offenses belie any suggestion that the Analogue Act was intended to create a strict liability public welfare offense. *See Staples*, 511 U.S. at 616-18.

Congress would have intended to imprison someone who unwittingly distributed brownies containing a marijuana analogue, but not brownies containing marijuana itself.

C. Reading The Statute To Encompass A Traditional Mens Rea Requirement Does Not Conflict With The Statute's Purpose.

To its credit, the Government has at least attempted an answer, claiming that proving intent in an analogue case is too hard and would therefore frustrate the statute's basic purposes. *See* BIO 13-17. "Of course, the purpose of every statute would be 'obstructed' by requiring a finding of intent if we assume that it had a purpose to convict without it." *Morissette*, 342 U.S. at 259. And in this case, nothing in the general purposes of the Analogue Act overcomes the plain indications in the text that Congress did not intend to facilitate prosecutions by forgoing any meaningful intent requirement.

1. Initially, the Government does not, and cannot, claim that it has had any difficulty proving the mens rea of the clandestine chemists, and their employers, who were the principal targets of the legislation.

The Government has acknowledged, and the legislative history overwhelming confirms, that "Congress enacted the Analogue Act to prevent underground chemists from altering illegal drugs in order to create new drugs that are similar to their precursors in effect but are not subject to the restrictions imposed on controlled substances." BIO 13-14 (citation and internal quotation marks omitted). Thus, the House Report's complete

description of the "Purpose of the Legislation" was that "[t]his bill will enable the Drug Enforcement Administration to investigate and prosecute *clandestine chemists* who develop subtle chemical variations of controlled substances (called analogues or 'designer drugs') for illicit distribution and abuse." House Report 2 (emphasis added); *see also id.* ("The legislation is designed both to enable swift investigation and prosecution of *illicit drug designers* and to fully protect the interests of legitimate scientific investigation into the properties of drugs that may have important therapeutic potential.") (emphasis added). After summarizing the hearing testimony, the Report concluded that the "only way to effectively protect the public is to investigate and prosecute *these chemists* for their new discoveries prior to formal control of the drugs." *Id.* 5 (emphasis added). The Senate Report likewise explained that the "Need for Legislation" arose from "loopholes that enable *underground chemists* to evade our Nation's drug laws." Senate Report 1 (emphasis added). And both reports are replete with references to "basement chemists,"[14] "unscrupulous chemists,"[15] "dangerous chemists,"[16] "illicit chemists,"[17] and "[m]akers of designer drugs."[18] Conversely, consistent with the focus on chemists, several exemptions were added to

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[14] Senate Report 3.

[15] *Id.* 5.

[16] *Id.*

[17] House Report 5.

[18] *Id.* 4.

the statute to protect legitimate drug researchers. *See* 21 U.S.C. § 802(32)(C)(ii)-(iii); House Report 8-9.

The mens rea requirement written in the statute aligns perfectly with the principal targets of the statute. Those who create analogues by making slight chemical alterations to controlled substances obviously are aware of their substantial similarity in structure and effect to illegal drugs, as are those who employ them to do that work.

2. The Government nonetheless argues that the Fourth Circuit's minimal mens rea element is necessary to facilitate convictions of "street-level dealers" who may not know the precise nature of what they are selling, or may even be lied to by their suppliers in order to shield them from liability. BIO 14-15. But that objection is unfounded as well.

To start, the same could be argued of ordinary controlled substances. That is, some street-level dealers may not know the true nature of what they are selling, and their suppliers may intentionally keep them in the dark. For example, the DEA has now placed on the controlled substance schedules several ingredients found in many bath salts, including all of the substances for which petitioner was prosecuted under the Analogue Act.[19] Accordingly, were the Government to prosecute petitioner (or someone like him) for selling bath salts containing the same substances today, it would have to prove that he knew he was selling a controlled substance, despite the possibility that he might not

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[19] *See* Pet. App. 6a n.2; 79 Fed. Reg. 12928 (March 7, 2014) (emergency scheduling of 4-methyl-n-ethylcathinone).

know the ingredients in his products or was lied to by his supplier. *See, e.g.*, *United States v. Ali*, 735 F.3d 176, 186-87 (4th Cir. 2013). Congress presumably understood that including a conventional mens rea requirement in Section 844(a) would make it harder for the Government to secure convictions of those who did not know the nature of what they were selling. And it would have understood that requiring the Government to prosecute analogue cases under the exact same provision would have the same consequence.

In any event, the Government has not pointed to any actual evidence that it has been unduly hindered in prosecuting analogue cases in the jurisdictions that require proof that the defendant knew he was selling an analogue. In fact, it routinely convicts "street-level dealers" in those circuits. *See, e.g.*, *United States v. Sullivan*, 714 F.3d 1104, 1107 (8th Cir. 2013); *United States v. Bamberg*, 478 F.3d 934, 939-40 (8th Cir. 2007); *Turcotte*, 405 F.3d at 529-30; *United States v. Ansaldi*, 372 F.3d 118, 121 (2d Cir. 2004); *United States v. Haugen*, No. 12-305(2), 2014 WL 4722325, at *1 (Sep. 22, 2014 D. Minn.); *United States v. Ramos*, No. 13-CR-2034-LLR, 2014 WL 4437554, at *1 (N.D. Iowa Sept. 9, 2014); *United States v. Carlson*, No. 12-305, 2013 WL 6480744, at *1 (D. Minn. Dec. 10, 2013); *United States v. Toback*, No. 01-CR-410, 2005 WL 992004, at *1 (S.D.N.Y. Apr. 14, 2005); *see also* Brief for Appellee United States of America at 4-7, *United States v. Zhang*, No. 13-3410 (2d Cir. Sept. 19, 2014) (describing conviction and plea deals with multiple defendants in pending appeal).

As "in other drug cases, direct and circumstantial evidence, including evidence of the defendant's furtive conduct, can suffice to demonstrate that the defendant knew that the substance at issue was 'controlled.'" *United States v. Chin Chong*, 991 F. Supp. 2d 453, 456 (E.D.N.Y. 2014). For example, the defendant may have been involved in the production, or told by the producer that a substance is an analogue.[20] The Government can urge the jury to draw reasonable inferences from what defendant knows or says about effects. *Cf. Turcotte*, 405 F.3d at 527-28. And it can request that a jury be instructed that willful blindness or recklessness suffices to establish knowledge, as petitioner conceded in this case. *See* J.A. 30.

Moreover, there are a number of steps the Government can take to respond to any perceived difficulties that arise from applying an ordinary mens rea element to the Analogue Act.

For example, particularly in a case like this, where suspects are selling a product openly in a store or on the internet, the Government can inform the

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[20] At the time of enactment, it appears that the relationship between those who made and those who sold analogues was reasonably close. *See, e.g.*, Controlled Substance Analogs Enforcement Act of 1985: Hearing on S. 1437 Before the S. Committee on the Judiciary, 99th Cong. 9 (1985) (Senate Hearing) (statement of Sen. Hawkins) (noting that "there is no middleman" because the "synthetic drug operation is still in the hands of small entrepreneurs rather than under the control of organized crime"); *id.* at 37 (letter of Stephen Trott, Assistant Att'y Gen., Criminal Division) ("We have no indication at this time that organized crime has become involved in designer drug production or distribution.").

individuals that the substance they are selling is an analogue and prosecute them if they keep selling it. The Government should have had no difficulty persuading jury that a defendant who ignores such a warning knows he was selling an analogue. The DEA has apparently been willing to take this approach with some established retailers, if not individuals like petitioner. *See Chin Chong*, 991 F. Supp. 2d at 455 (noting testimony regarding the availability of one analogue "through Amazon.com and DEA outreach to large retailers").

If the Government prefers not to give defendants individualized notice of what it believes to constitute illegal analogues, the DEA may publish and publicize the list of analogues that it now keeps secret. *See* J.A. 58. Prosecutors can then ask the jury to draw the inference that the defendant was aware of (or willfully blind to) the facts disclosed in that publication.

And, of course, the DEA can invoke its emergency scheduling power to add new substances to the controlled substances schedules. *See* 21 U.S.C. § 811(h). Having done that, the Government need only prove that the defendant was aware of the chemical *identity* of what he was selling, not its chemical structure of effect. *See infra* Part II. The expedited process can be completed in as few as thirty days. 21 U.S.C. § 811(h)(1). And by all accounts (including the Government's) the DEA's use of that authority has been very effective in

combatting analogues over the years.[21] To be sure, Congress believed more was needed to get at clandestine chemists trying to keep one step ahead of the schedules. But as discussed, applying an ordinary mens rea element to Analogue Act offenses does not undermine that purpose.

Finally, nothing in petitioner's position prevents the Government from immediately protecting the public from alleged analogues by immediately seizing the analogues as contraband. *See* 21 U.S.C. § 881(a)(1). Under the federal drug forfeiture statute, the owner's ignorance of the true nature of the drugs in his possession is no defense. *Id.*

II. A Defendant Knows He Is Selling A Controlled Substance Analogue If He Knows (Or Is Willfully Blind To The Fact) That Substance Has The Characteristics Of An Analog As Defined By The Statute.

For the reasons just discussed, the district court erred in instructing the jury that the Government was required to prove only that petitioner intended the alleged analogues for human consumption. In

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[21] *See, e.g.*, House Report 4-5 ("In the Committee's view, generally this [emergency scheduling] authority has been used very effectively to address much of the designer drug problem."); Senate Hearing 21 (statement of Stephen Trott, Assistant Att'y Gen., Criminal Division) (emergency scheduling authority "addresses this problem and reduces the potential for abuse to a great extent"); Michael McLaughlin, *Bath Salts Incidents down Since DEA Banned Synthetic Drug*, Huffington Post (Sept. 4, 2012, 8:03 AM EDT), http://www.huffingtonpost.com/2012/09/04/bath-salts-ban_n_1843420.html.

addition, the district court erred in rejecting petitioner's proposed instruction, which defined what it meant to knowingly or intentionally distribute an analogue.[22]

1. The district court wrongly rejected petitioner's proposed instruction, which would have required the Government to prove that petitioner knew that the alleged analogues had a chemical structure, and an actual, intended or claimed effect, substantially similar to that of a schedule I or II controlled substance. *See* Pet. App. 21a; J.A. 29-30 (petitioner's proposed instructions).

As discussed, the Analogue Act incorporates Section 841(a)'s conventional mens rea element for analogue prosecutions. A "conventional mens rea element require[s] that the defendant know the facts that make his conduct illegal." *Staples v. United States*, 511 U.S. 600, 605 (1994). In the context of a scheduled controlled substance, that means that the defendant need only know the chemical name of what he is selling because the identity of the substance is the only criteria for its illegality. *See, e.g., United*

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[22] The two errors are independent grounds for reversal. *See* Fed. R. Crim. P. 30(d); *Jones v. United States*, 527 U.S. 373, 388 (1999); *see also* 2A WRIGHT & MILLER, 2A FED. PRAC. & PROC. § 484 & n.5 (4th ed. 2014) ("A party may object to an instruction given by the court although it has not requested an instruction of its own on the point.") (collecting citations). Accordingly, even if petitioner's proposed instruction were incorrect in some respect, that does not excuse the district court's error in omitting an essential element of the offense from the jury instructions. *See, e.g., United States v. Hurwitz*, 459 F.3d 463, 480 (4th Cir. 2006).

States v. Turcotte, 405 F.3d 515, 525-26 & n.2 (2005). In other words, because cocaine is expressly listed as a schedule I drug, and the CSA makes sale of schedule I drugs unlawful, knowing that a product contains cocaine is all a defendant needs to know to be on notice that its sale is illegal. *Id.*

However, the Analogue Act defines illegal analogues not by name, but by reference to their characteristics. *See* 21 U.S.C. § 802(32). Therefore, to decide whether selling a particular substance would be illegal, it is not enough to know the chemical's name; one must know its chemical structure and effects, and determine whether it is "substantially similar" in structure and effect to a controlled substance.

In this way, the Analogue Act is similar to other statutes that prohibit possession or sale of objects meeting certain criteria. For example, in *Staples v. United States* this Court considered a statute that prohibited unregistered possession of a machine gun. Rather than attempt to list all known machine guns by brand name and model, Congress defined a "machine gun" by reference to the weapon's characteristics – namely, its ability to fire multiple rounds upon a single pull of the trigger. 511 U.S. at 602 (describing 26 U.S.C. § 5845(a)(6), (b)). The Court explained that in such cases, under a conventional mens rea element, it is insufficient for the Government to prove that the defendant knew he possessed a gun that, unbeknownst to him, had the characteristics that made it a machine gun. Instead, the prosecution must "prove that [the defendant]

knew of the features of his AR-15 [rifle] that brought it within the scope of the Act." *Id.* at 619.[23]

The Court has applied the same principle to other statutes prohibiting knowing possession of objects having specified characteristics. *See Flores-Figueroa v. United States*, 556 U.S. 646, 657 (2009) (defendant must know means of identification belonged to another person); *United States v. X-Citement Video, Inc.*, 513 U.S. 64, 66 (1994) (defendant must know pornography involved minors); *Posters 'N' Things, Ltd. v. United States*, 511 U.S. 513, 524 (1994) (defendant must know product likely to be used with illegal drugs); *Morissette v. United States*, 342 U.S. 246, 271 (1952) (defendant must know that converted property belong to another); *cf. also United States v. U.S. Gypsum Co.*, 438 U.S. 422, 444 (1978) (criminal antitrust violation requires defendant know not only what conduct it engaged in, but also "of its probable consequences and having the requisite anticompetitive effects").[24]

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[23] As the Government has noted, BIO 13, in *Staples* the Court construed the scope of an implied, rather than express, mens rea element. But in doing so, the Court made clear it was implying a "conventional" mens rea requirement of the sort embodied in statutes that expressly criminalize only knowing conduct. 511 U.S. at 619; *see also Carter v. United States*, 530 U.S. 255, 269 (2000) (explaining *Staples* implied an ordinary "general intent requirement"). Indeed, it would be passing strange if an *implied* knowledge requirement were more demanding than an *express* one. *See id.* (explaining that courts should be parsimonious in implying mens rea elements).

[24] There are exceptions to the presumption, including with respect to "jurisdictional" elements that go to the forum for prosecuting the crime rather than the criminality of the act.

As applied to the Analogue Act, this requires that "the offender must have known or intended he was manufacturing, distributing, or possessing a substance that he knew or intended to have the characteristics of a controlled substance analog as defined" by the Act. Senate Report 4.[25] Accordingly, it is not enough that a defendant may know the chemical name of the substance he is selling, just as it was not enough in *Staples* that the defendant knew the name of the brand of rifle he had purchased. Instead, the "defendant must know that the substance at issue has a chemical structure substantially similar to that of a controlled substance, and he or she must either know that it has [substantially] similar physiological effects or intend or represent that it has such effects." *Turcotte*, 405 F.3d at 527.[26]

This does not amount to "sanctioning a mistake-of-law defense." BIO 16. Once a person knows that a substance is substantially similar to a controlled

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See, e.g., *United States v. Feola*, 420 U.S. 671, 683-85 (1975). But no such exception applies here.

[25] The Government is correct (BIO 12 n.2) that the Senate Report discussed a prior version of the bill. That proposal established an independent analogue offense rather than directing that analogues be treated as schedule I controlled substances for purposes of existing law. *See* Senate Report 8-9. But the change in form is not material to the point here because both versions prohibited only knowing or intentional possession or distribution of analogues.

[26] As is true for ordinary controlled substance offenses, it is no defense that the defendant believes he is selling one analogue but is actually selling another (or an actual controlled substance). *See supra* n. 11.

substance, it is no defense that he was unaware of the Analogue Act or otherwise believed the possession of the analogue was lawful. *Cf., e.g., United States v. Barbosa*, 271 F.3d 438, 458 (3d Cir. 2001) (in an ordinary controlled substance case, the prosecution need not prove the defendant's "knowledge that the facts amount to illegal conduct").

2. The Government insists that someone who sells products "for use as recreational drugs" and "compares them to controlled substances" should "not be heard to complain that he is innocent simply because he did not know whether a jury would find his [products] to meet the statutory definition of an analogue." BIO 16.

To the extent the Government intends this as a defense of the Fourth Circuit's interpretation, it is a non sequitur. Neither the court of appeals' decision nor the jury instructions required the Government to prove that petitioner marketed a substance for recreational drug use or compared it to a controlled substance. All either required was that the defendant knew he was distributing *something* and that he intended it to be consumed by humans. Pet. App. 21a; J.A. 33-34, 40. On that interpretation, a Girl Scout unknowingly selling cookies adulterated with an analogue is a drug trafficker, too.

To the extent the Government means to propose a mens rea element under which it must prove the defendant's knowledge (or representation) of an alleged analogue's substantial similarity in *effect*, but not his knowledge of its substantial similarity in *chemical structure*, that suggestion has no basis in the text of the statute or legal tradition. As discussed, in combination, the text of Sections 813

and 841(a) requires the Government to prove that the defendant knowingly or intentionally distributed an analogue. That means the defendant must know enough about the chemical structure of the substance in question to know that it is *is* an analogue, not that it could *potentially* be an analogue. A defendant does not knowingly possess a machine gun simply because he knows that his rifle is capable of shooting bullets and, therefore, might be a machine gun, depending on how many bullets it can fire on a single trigger pull. *See Staples*, 511 U.S. at 609-12 (rejecting argument that Government should be required to prove only that defendant knew he was in possession of a "dangerous" weapon). And the Government cannot prove knowing possession of pornography involving minors simply by demonstrating that the defendant knew a film was sexually explicit; it must show that the defendant was aware of the age of the participants. *See X-Citement Video*, 513 U.S. at 66.

Any interpretation that excused the Government from proving the defendant's knowledge of structural similarity would also run counter to the traditions and presumptions discussed above. Under the statute, chemical similarity is an essential element of the crime. Congress knew that many substances – including caffeine and alcohol – can have an *effect* substantially similar to some controlled substances, particularly when taken in large quantities. *See* House Report 7. It determined, however, the prohibit only those substances that had such effects because they were made through small alterations to an existing controlled substance. Thus, the House rejected a proposal that would have allowed conviction even if a substance was not structurally similar to an existing controlled

substance, so long as the "substance had been 'specifically designed' to produce an effect 'substantially similar' to that of a controlled substance in scheduled I or II." *Id.* 6.

Any interpretation that relieved the Government of its burden to proven knowledge of structural similarity thus would fail to extend the express mens rea requirement incorporated by the statute to every element of the offense. *See Flores-Figueroa*, 556 U.S. at 650. It would allow conviction of a defendant who was unaware of one of the "facts that make his conduct illegal." *Staples*, 511 U.S. at 605. And it thus would fail to ensure that the defendant was aware of an essential fact "necessary to separate wrongful conduct from otherwise innocent conduct." *Carter*, 530 U.S. at 269 (citation omitted).

To be sure, some may deem the marketing of substances intended to produce altered psychological states unseemly, or even dangerous and immoral. But the same could be said of the sale or possession of false identifications, machine guns, drug paraphernalia, and pornography. Yet this Court has not hesitated to apply traditional mens rea principles to criminal statutes banning possession or sale of those items. *See Flores-Figueroa*, 556 U.S. at 652-53; *Staples*, 511 U.S. at 605; *Posters 'N' Things*, 511 U.S. at 522-24; *X-Citement Video,* 513 U.S. at 72. Even setting aside the difficulties in administering an interpretative rule that depends on a court's views on the social desirability of particular conduct, consistent and uniform application of the Court's settled mens rea presumptions is necessary to provide "legislators a predictable background rule

against which to legislate." *Landgraf v. USI Film Prods.*, 511 U.S. 244, 273 (1994).

III. Petitioner's Interpretation Of The Statute Is Necessary To Save The Statute From Constitutional Infirmity.

Requiring the Government to prove that the defendant was aware of the substantial similarity between the alleged analogue and a controlled substance is further required to avoid casting grave doubt on the Analogue Act's constitutionality. *See, e.g.*, *Jones v. United States*, 529 U.S. 848, 857 (2000) ("[W]here a statute is susceptible of two constructions, by one of which grave and doubtful constitutional questions arise and by the other of which such questions are avoided, our duty is to adopt the latter.") (citations omitted).

A. As Construed Below, The Analogue Act Is Unconstitutionally Vague.

The Due Process Clause requires that "a penal statute define the criminal offense with sufficient definiteness that ordinary people can understand what conduct is prohibited." *Kolender v. Lawson*, 461 U.S. 352, 357 (1983). This fair warning requirement protects a person's right to "steer between lawful and unlawful conduct," *Grayned v. City of Rockford*, 408 U.S. 104, 108 (1972), by insisting that "no man shall be held criminally responsible for conduct which he could not reasonably understand to be proscribed." *Bouie v. City of Columbia*, 378 U.S. 347, 351 (1964) (citation omitted).

Relatedly, a statute may not be so broad and unconstrained as to "encourage arbitrary and discriminatory enforcement." *Kolender*, 461 U.S. at

357. Vague laws leave the line between lawful and illegal conduct to be drawn "on an ad hoc and subjective basis" by those who enforce the statute, inevitably leading to disparate treatment of similarly situated defendants based on the happenstance of the understanding adopted by particular police officers, prosecutors, judges, and juries. *Id.* at 109.[27]

Finally, vague laws implicate separation of powers concerns by "impermissibly delegat[ing] basic policy matters to policemen, judges, and juries for resolution." *Grayned*, 408 U.S. at 108-09.[28]

The Analogue Act gives rise to all of these constitutional concerns in spades. In fact, as construed by the Fourth Circuit, the statute is unconstitutionally vague as applied to petitioner's case and many others like it.

1. As Construed, The Statue Fails To Provide Fair Notice Of What The Law Forbids.

As the Government effectively admits, *see* BIO 15-16, it is all but impossible for someone like

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[27] The risk of arbitrary treatment is not limited to criminal prosecutions – vague criminal statutes allow law enforcement broad discretion to seize cash and other property under drug forfeiture laws. *See generally, e.g.*, Marian R. Williams, et al., Institute for Justice, Policing for Profit: The Abuse of Civil Asset Forfeiture (March 2010), *available at* http://www.ij.org/images/pdf_folder/other_pubs/assetforfeituretoemail.pdf.

[28] Vague statutes also empower prosecutors to make charging decisions based on aggressive readings of vague statutes that impose severe penalties, increasing their negotiating "leverage" with defendants. BIO 15.

petitioner to discern whether a particular substance meets the statutory definition of an analogue. After all, the only way the Government can make that determination itself – in deciding whom to arrest and in attempting to prove the case in court – is by relying on expert scientists who, in turn, require expensive lab equipment (like mass spectrometers), subscriptions to databases of scientific literature, and of course years of technical training and experience. *See, e.g.*, C.A. J.A. 466-74 (DEA expert describing process for reaching opinion).

An ordinary citizen attempting to answer those same questions faces daunting obstacles at every turn. To start, the *information* required to apply the statute is inaccessible to most people. One must know all the chemicals in the product possessed or sold, which for things like diet supplements, energy drinks, homeopathic remedies, or aroma therapy products, can be a lot. Absent complete and truthful labeling (which is not required of many products), this could require a mass spectrometer or equipment similarly unavailable to the average person. And even then, laboratory testing would only disclose the chemical names of the substances. *See, e.g.*, C.A. J.A. 722 (DEA lab report in this case). To know if it is an analogue, one must also know the substances' chemical structure, *e.g.*, the arrangement of atoms and the nature of the bonds between them. And not just the structure of the substance the defendant wants to sell, but also the structure of every one of the more than 200 schedule I or II substances to which a government chemist might compare it. *See* 21 C.F.R. pt. 1308

Even that is harder than it sounds (and it already sounds pretty difficult). Someone like petitioner would have to know not only what the relevant substance's *actual* chemical structure is, but he must also somehow discern what aspects of that structure are *material*. The DEA's expert in this case acknowledged, for example, that the chemical charts he used to judge structural similarity disregarded all carbon and hydrogen atoms, explaining that they made the schematics "very, very busy" and "too hard to decipher." C.A. J.A. 425. He stated that [a]s a chemist," he knew that this aspect of the structure did not matter. *Id.* Likewise, he testified that other kinds of seemingly substantial differences in the schematics of substances "may be deceiving" to a lay person but a chemist knows the difference "has no structural meaning." *Id.* 439.

The Government's expert thus all but acknowledged that there would be no way for lay person to make the *factual* determinations the statute requires. But even if someone like petitioner did somehow work out the relevant structural features of a substance and all potentially comparable controlled substances, he would then be faced with the *legal* question of whether the structures are "substantially similar" within the meaning of the statute. There is a reason criminal laws generally do not prohibit possession of "machine guns or substantially similar weapons" and why serious vagueness concerns arise from a statute that increases penalties based on a prior conviction that "otherwise involves conduct that presents a serious

potential risk of physical injury to another."[29] To begin with, the word "substantially" is inherently vague. Nothing in the statute gives it any further substance, and the experts at trial agreed (and others have confirmed), that the term "substantially similar" has no scientific meaning. *See* C.A. J.A. 455, 524; *United States v. Forbes*, 806 F. Supp. 232, 237 (D. Colo. 1992). Accordingly DEA officials have acknowledged to Congress that the "threshold for 'substantially similar' is subjective and may differ from expert to expert."[30]

The Court has recognized that such ambiguous line-drawing along a gradient – while sometimes tolerable in civil statutes and sufficient to provide a basis for further elaboration by administrative regulations[31] – can render a criminal statute unconstitutionally vague. *See, e.g.*, *City of Chicago v. Morales*, 527 U.S. 41, 59 (1999) (plurality opinion) (statute criminalizing failure, upon police order, to remove oneself "from the area" unconstitutionally vague because it leaves to speculation "[h]ow far must [one] move?"); *Connally v. Gen. Constr. Co*, 269 U.S. 385, 395 (1926) (statute criminalizing failure to pay daily wage prevalent in nearby "locality" requires

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[29] 18 U.S.C. § 924(e)(2)(B)(ii); *see* Order for Supplemental Briefing and Reargument, *Johnson v. United States*, No. 13-7120 (Jan. 9, 2015).

[30] Lisa N. Sacco & Kristin Finklea, Cong. Research Serv., *Synthetic Drugs: Overview and Issues for Congress* 16 (2014), *available at* http://fas.org/sgp/crs/misc/R42066.pdf.

[31] *See Vill. of Hoffman Estates v. Flipside Hoffman Estates, Inc.*, 455 U.S. 489, 498-99 (1982); *Cline v. Frink Dairy Co.*, 274 U.S. 445, 463-64 (1927) .

defendants to guess "[h]ow near" two places must be to exist in the same locality); *Cline v. Frink Dairy Co.*, 274 U.S. 445, 465 (1927) (statute criminalizing certain business combinations unless a "reasonable profit" cannot otherwise be obtained unconstitutionally vague); *United States v. L. Cohen Grocery Co.*, 255 U.S. 81, 89 (1921) (statute making it a crime to charge an "unjust or unreasonable rate" provides no "ascertainable standard of guilt").

Not only is it unclear how *much* similarity is enough to be "substantial," but the "scientific community cannot even agree on a methodology to use to determine structural similarity." *Forbes*, 806 F Supp. at 237. Scientists *do* agree that one cannot simply count up the number of differences in the atomic structure of two molecules. The experts in this case, for example, testified that changes in a small number of atoms could have either a dramatic difference on the substance's effects on the human body, or none at all. *See* C.A. J.A. 431-32, 526, 535. So the question is what *kinds* of molecular changes are relevant and how significant particular changes are.

And on *that* question, scientists have been unable to reach any agreement, fundamentally because it is not a *scientific* question, but a *legislative* choice Congress failed to make. Nothing in science tells a chemist (much less an ordinary citizen) whether substituting an alkyl group on a phenethylamine core, rather than adding an extra carbon atom between a phenyl ring and nitrogen atom, makes two chemicals "substantially similar" in

chemical structure.[32] Indeed, scientists disagree even on the basic question of whether to compare chemical structure in two dimensions or three. In this case, the DEA's expert used two-dimensional schematics. C.A. J.A. 574. Dr. Lee, however, explained that two chemicals that look similar in two-dimensions may actually be very different in three dimensions (just as an orange looks like a Frisbee in two dimensions, but not in three, C.A. J.A. 525). And, critically, he explained that those differences in the third dimension can dramatically affect a substance's effect on the body, *id.* at 525-28.

This is not simply a matter of disagreement among hired gun expert witnesses. In 2012, the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG) – a group co-founded by the DEA itself – formed a subcommittee to explore making recommendations for forensic scientists analyzing alleged analogues.[33] In August 2014, almost thirty years after the Analogue Act was passed, the group produced three pages of recommendations.[34] Despite initial proposals that the group develop guidelines for judging substantial similarity,[35] the final document

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[32] *See* C.A. J.A. 426-27, 431 (Dr. DiBerardino).

[33] *See* SWGDRUG Meeting Minutes, Portland, ME, July 10-12, 2012, *available at* http://www.swgdrug.org/Documents/SWGDRUG%20Meeting%20Minutes%20July%202012.htm.

[34] *See* SWGDRUG Recommendations, 26-28 (version 7.0, Aug. 14, 2014), *available at* http://www.swgdrug.org/Documents/SWGDRUG%20Recommendations%20Version%207-0.pdf.

[35] *See* SWGDRUG Meeting Minutes, *supra* n. 33 (notes of July 12, 2012 meeting).

simply noted that "the requirements for legal consideration as a controlled substance analogue are defined in jurisdictional legislation."[36] With admirable frankness, however, the paper acknowledged that "[e]valuation of similarity is a subjective matter and opinions may differ."[37] Another group, the Advisory Committee for the Evaluation of Controlled Substance Analogs, has likewise attempted[38] but failed[39] to develop any substantial guidance on the question.

It should be no surprise, therefore, that even scientists frequently disagree about whether particular substances meet the statutory definition. A DEA official testified before Congress that substantial similarity is "by its nature an 'opinion' and therefore subject to opposing views from other expert chemists."[40] Indeed, although the DEA obviously has no interest in publicizing internal disagreements among its scientists, disputes within the DEA's own laboratories have surfaced in some cases. *See United States v. Nashash*, No. 12-CR-778, 2014 WL 169743, at *1 (S.D.N.Y. Jan. 15, 2014)

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[36] SWGDRUG Recommendations, *supra* note 34, at 26.

[37] *Id.* at 27.

[38] *See* http://www.druganalogs.org/mission.html.

[39] *See* http://www.druganalogs.org/subcommittees.html.

[40] *Bioterrorism, Controlled Substances, and Public Health Issues: Hearing Before the H. Subcomm. on Health, Comm. on Energy and Commerce*, 112th Cong. 17 (July 21, 2011) (statement of Joseph T. Rannazzisi, Deputy Assistant Administrator, Office of Diversion Control, DEA), *available at* http://www.gpo.gov/fdsys/pkg/CHRG-112hhrg73892/pdf/CHRG-112hhrg73892.pdf.

(noting that defendant seeking discovery regarding DEA analysis of alleged analogues cited "an internal DEA email where a special forensics lab concluded that [the alleged analogues] are not substantially similar in structure and are not Analogues"); *Forbes*, 806 F Supp. at 237 (noting defendant was prosecuted despite fact that the "government's own chemists cannot agree" on whether the substance at issue met the "substantial similarity" test); Exhibit 2, Motion to Compel Production of *Brady* Material, Docket No. 90, *United States v. Fedida*, No. 12-CR-209 (M.D. Fla. July 11, 2013) (letter from Department of Justice to criminal defendant acknowledging dispute among DEA chemists regarding whether charged substance was an analogue), *available on Pacer*.

Finally, the courts have been unable to resolve these statutory deficiencies in their limited role applying deferential review to jury fact-finding. *See, e.g.*, Pet. App. 22a-27a (applying deferential standard of review); *id.* 23a (emphasizing that an "appellate court is not the proper forum to refight a battle of expert witnesses") (citation omitted); Amicus Br. of National Assoc. Crim. Defense Lawyers.

At bottom, Congress has enacted a statute under which a "substance's legal status as a controlled substance analogue is not a fact that a defendant can know conclusively *ex ante*; it is a fact that the jury must find at trial." *United States v. Turcotte*, 405 F.3d 515, 526 (7th Cir. 2005). Even worse, it is a fact a jury can find at trial *only* on the basis of expert testimony from scientists who cannot agree even on the basic framework for deciding the question, while employing technology and skills beyond the reach of ordinary people like petitioner. To top it all off, the

jury's conclusion is then used to impose retroactive criminal punishment on a defendant for conduct occurring well before his trial.

The Analogue Act thus bears all the markings of an unconstitutionally vague statute. *See, e.g.*, *Ashton v. Kentucky*, 384 U.S. 195, 198 (1966) (Due Process Clause prohibits a law whose meaning can be determined only on a "case to case basis"); *Lanzetta v. New Jersey*, 306 U.S. 451, 453-55 (1939) (due process violated when critical term of criminal statute had no settled meaning in legal tradition, dictionaries, or social science); *L. Cohen Grocery*, 255 U.S. at 91 (vagueness indicated by efforts "made by administrative officers to establish a standard of their own to be used as a basis to render the [statute] capable of execution"); *id.* at 90 & n.2 (lower courts' inability to reach consensus on meaning of law's strong evidence of unconstitutionality); *cf. Sykes v. United States*, 131 S. Ct. 2267, 2286-87 (2011) (Scalia, J., dissenting) (asking "is it seriously to be expected that the average citizen would be familiar with the sundry statistical studies" underlying the Court's interpretation of the ACCA's residual clause).[41]

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[41] While petitioner has focused on the vagueness of the requirement of substantial similarity in chemical structure, similar problems can arise with respect to similarity in effect. How, for example, is a law-abiding citizen to know whether a dietary supplement advertised as boosting energy has a substantially similar stimulant effect to a controlled substance she cannot legally try herself? The DEA's expert was able to form an opinion in this case only through an examination of scientific literature inaccessible (and likely incomprehensible) to ordinary people. C.A. J.A. 466-75.

2. *As Construed, The Statute Risks Arbitrary Law Enforcement.*

The unavoidable vagueness of the statutory terms likewise violates "the requirement that a legislature establish minimal guidelines to govern law enforcement." *Kolender*, 461 U.S. at 358. The risk of arbitrary and discriminatory treatment is heightened by the fact that the ultimate arbiter of whether a particular substance is an analogue is the factfinder in each criminal case, ordinarily a lay jury.

For one thing, assigning that task to the factfinder unavoidably makes the lawfulness of any given substance subject to determination "on an ad hoc" and "case to case basis." *Grayned*, 408 U.S. at 109; *Ashton*, 384 U.S. at 198. This risks the law meaning one thing for one defendant, and another thing for someone else. *Compare, e.g.*, *Turcotte*, 405 F.3d at 524 (jury found that 1,4 Butanediol was not an analogue) *with United States v. Brown*, 279 F. Supp. 2d 1238 (S.D. Ala. 2003) (court in bench trial concluding that same substance was an analogue); *compare also McKinney v. United States*, 221 F.3d 1343 (8th Cir. 2000) (unpublished table decision) (successful prosecution of defendant for possession of phenethylamine), *and United States v. Nunez*, 57 Fed. Appx. 776, 776 (9th Cir. 2003) (same), *with* J.A. 424 (DEA expert in this case testifying that phenethylamine is *not* an analogue). And the resulting arbitrariness is distinctly lopsided: if a defendant loses the debate before a jury, he goes to jail; if the Government loses, it can always try again with another jury in another prosecution.

In addition, the very nature of the complex scientific debate risks arbitrary results from inexpert

jurors who may or may not understand, or be capable of critically evaluating, the disagreements among scientists on matters of chemistry and biology. Unconstrained by the law and unable to fully understand the science, jurors may be left "to pursue their personal predilections," *Kolender*, 461 U.S. at 358 (citation omitted), basing their verdict (consciously or not) on their views of whether the defendant was engaged in unsavory, rather than illegal, conduct.

3. As Construed, The Statute Raises Grave Separation Of Powers Concerns.

The Analogue Act's vagueness also implicates the Constitution's division of powers among the branches, effectively assigning legislative powers to courts, juries, and the experts upon which both must rely.

The statutory vagueness arises from Congress's fundamental failure to make the legislative decisions necessary to implement the law. For example, as noted, an essential vagueness in the statute arises from its failure to identify in what respect two chemicals must be structurally similar and how much similarity is enough. In practice, the statutory gap is filled by what is essentially a *legal* interpretation adopted by expert witnesses in the course of answering what is portrayed as a *factual* question within his or her expertise. In this case, for example, Dr. DiBerardino testified he concluded one of the substances at issue here were alleged analogues because it had a phenethylamine core with substitutions involving "the types of chemical moieties that are similar to those found in the schedules." C.A. J.A. 454. He acknowledged that

this definition of substantial similarity was "not found in the statute." *Id.* And when asked whether there is "a scientifically commonly understood definition to substantially similar," he answered "I don't think so, no." *Id.* 455. Of course, a jury might reject the prosecution expert's implicit legal interpretation and adopt instead the defense expert's, or come up with one of its own. But that just proves the point – whoever is making the decision, it is not Congress.[42]

"Fuzzy, leave-the-details-to-be-sorted-out-by-the-*courts* legislation" is bad enough. *See Sykes*, 131 S. Ct. at 2288 (Scalia, J., dissenting) (emphasis added). It may require judicial application of the statute to one factual context after another "until the cows come home," id. at 2287, but at least judicial decisions bind the Government in the next case and gradually put the public on notice of what the law requires. Leaving the details to be sorted out by chemists and jurors in one-off decisions is an abdication of legislative responsibility the Constitution should not tolerate.

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[42] Of course, Congress may delegate some policy decisions to an administrative agency, either by requiring it to elaborate the statutory language through regulations or, as it did under the CSA, by charging the agency with identifying the products subject to the statute, *see* 21 U.S.C. § 811(a). But Congress self-consciously avoided that route to clarity, notice, and even-handed application of the law when it enacted the Analogue Act.

B. A Robust Mens Rea Element Would Help Mitigate The Statute's Vagueness.

For the foregoing reasons, the Analogue Act as construed by the Fourth Circuit is unconstitutionally vague as applied to individuals like petitioner, because it permits conviction of defendants who do not know, and cannot reasonably be expected to discover, whether the substances they possess are illegal analogues under the statute's inscrutable definition.

That does not, however, mean that the Court must declare the statute unconstitutional, on its face or even as applied to petitioner. The Court "has recognized that a scienter requirement may mitigate [a] law's vagueness, especially with respect to the adequacy of notice to the complainant that his conduct is proscribed." *Hoffman Estates*, 455 U.S. at 499; *see also, e.g.*, *Boyce Motor Lines, Inc. v. United States*, 342 U.S. 337, 342 (1952). In 1985, when members of Congress worried about the vagueness of the proposed Analogue Act, the Department of Justice thus assured them that "the constitutionality of a standard challenged as vague is closely tied to whether the standard incorporates a specific intent requirement," and that the bill the Department supported required that "the offense must be committed knowingly or intentionally." Senate Hearing 29 (statement of Stephen Trott, Assistant Att'y Gen., Criminal Division).

Construed to contain a conventional mens rea element, the Analogue Act may well pass constitutional muster in its core application against chemists who set out to design substances that mimic the effects of a controlled substance through small

alterations in chemical structure. At the same time, that construction of the statute should preclude conviction of many for whom the law is hopelessly indecipherable.

CONCLUSION

For the foregoing reasons, the judgment of the court of appeals should be reversed.

Respectfully submitted,

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March 2, 2015

No. 14-378

In the Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN, PETITIONER

v.

UNITED STATES OF AMERICA

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

BRIEF FOR THE UNITED STATES

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QUESTION PRESENTED

Whether, in a prosecution under the Controlled Substance Analogue Enforcement Act of 1986, Pub. L. No. 99-570, 100 Stat. 3207-13 (21 U.S.C. 813), the government must prove that the defendant knew, had a strong suspicion, or deliberately avoided knowing that the substance that he was intentionally distributing for human consumption was substantially similar in chemical structure to a controlled substance.

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In the Supreme Court of the United States

No. 14-378

STEPHEN DOMINICK MCFADDEN, PETITIONER

v.

UNITED STATES OF AMERICA

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

BRIEF FOR THE UNITED STATES

OPINIONS BELOW

The opinion of the court of appeals (Pet. App. 1a-27a) is reported at 753 F.3d 432. The opinion of the district court (Pet. App. 44a-68a) is reported at 15 F Supp. 3d 668.

JURISDICTION

The judgment of the court of appeals was entered on May 21, 2014. A petition for rehearing was denied on June 17, 2014 (Pet. App. 69a). On August 21, 2014, the Chief Justice extended the time within which to file a petition for a writ of certiorari to and including October 14, 2014, and the petition was filed on October 2, 2014. The petition for a writ of certiorari was granted on January 16, 2015. The jurisdiction of this Court rests on 28 U.S.C. 1254(1).

STATUTORY PROVISIONS INVOLVED

The relevant statutory provisions are reproduced in the appendix to this brief. App., *infra*, 1a-3a.

STATEMENT

Following a jury trial in the United States District Court for the Western District of Virginia, petitioner was convicted on one count of conspiring to distribute a substance or mixture containing one or more controlled substance analogues, in violation of 21 U.S.C. 841(b)(1)(C), 846; and eight counts of distributing a substance or mixture containing one or more controlled substance analogues, in violation of 21 U.S.C. 841(a)(1) and (b)(1)(C). Pet. App. 28a-32a; see 21 U.S.C. 813, 802(32). He was sentenced to 33 months of imprisonment, to be followed by 30 months of supervised release. Pet. App. 33a-35a. The court of appeals affirmed. *Id.* at 1a-27a.

1. Under the Controlled Substance Analogue Enforcement Act of 1986 (Analogue Act), Pub. L. No. 99-570, 100 Stat. 3207-13, "[a] controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I." 21 U.S.C. 813. The Controlled Substances Act (CSA), 21 U.S.C. 801 *et seq.*, makes it unlawful, *inter alia*, "for any person knowingly or intentionally" to distribute a controlled substance. 21 U.S.C. 841(a)(1). Accordingly, the combination of the Analogue Act and the CSA make it unlawful for any person knowingly or intentionally to distribute a controlled substance analogue when intended for human consumption.

The term "controlled substance analogue" is generally defined to mean a substance:

> (i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;
>
> (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or
>
> (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. 802(32)(A). The majority of courts to have considered the question have held that the foregoing definition must be read in the conjunctive, *i.e.*, that a substance qualifies as a controlled substance analogue only if it satisfies Subsection (i) *and* either Subsection (ii) or Subsection (iii). See *United States* v. *Turcotte*, 405 F.3d 515, 521-523 (7th Cir. 2005) (surveying case law), cert. denied, 546 U.S. 1089 (2006). The government does not dispute in this case that that is a proper construction of the statute. The definition also expressly excludes any controlled substance, any drug approved by the Food and Drug Administration, or the investigational use of a drug. See 21 U.S.C. 802(32)(C).

2. In July 2011, law-enforcement officers began investigating the use and distribution of substances commonly known as "bath salts" in the Char-

lottesville, Virginia, area. Pet. App. 5a. Bath salts are used as recreational drugs and, when ingested, are capable of producing effects similar to those produced by controlled substances, including cocaine, methamphetamine, and methcathinone. *Ibid.*

The investigation focused on a Charlottesville video rental store, owned and operated by Lois McDaniel, that sold bath salts. Pet. App. 5a. Using confidential informants, investigators purchased bath salts from McDaniel. *Ibid.* Testing by the United States Drug Enforcement Agency (DEA) revealed that the bath salts contained substances later proved at trial to be controlled substance analogues: 3,4-methylenedioxypyrovalerone (MDPV) and 3,4-methylenedioxymethcathinone (MDMC), also known as methylone. *Ibid.* Additional bath salts later seized from McDaniel's store contained a combination of MDPV. MDMC, and methylethylcathinone (4-MEC) (also proved at trial to be a controlled substance analogue). *Id.* at 5a, 7a-9a.

McDaniel agreed to cooperate with investigators, and she informed them that petitioner had supplied the bath salts she was selling. Pet. App. 5a. Petitioner's bath salts were "white powder," "off-white powder," and "beige crystalline powder," which petitioner sold in plastic "baggies," "plastic vials," and "blue jeweler's bag[s]." J.A. 43-46, 49-54, 57-58. Petitioner sold his products to McDaniel for $15 per gram (approximately $425 per ounce), and McDaniel sold them to her customers for $30 to $70 per gram (approximately $850 to $1980 per ounce). J.A. 47. The names petitioner used for his products included "Speed," "No Speed," "No Speed Limit," "The New Up," "Alpha,"

"Sheen's Winning," and "Hardball." J.A. 46, 50-53, 62-63, 75, 82.

McDaniel agreed to make recorded telephone calls to petitioner to order more bath salts. Pet. App. 5a. During the calls, petitioner stated that one of his products was "the replacement for the MDPV"—which petitioner had previously sold but had been recently listed as a controlled substance. J.A. 62; see Pet. App. 6a n.2. He discussed which of his products was the "most powerful" and which gave the most "intense" "feeling." J.A. 62. Petitioner explained to McDaniel that one substance (a mixture of a chemical called Alpha and 4-MEC) was like cocaine, that the "No Speed Limit" was like crystal meth, and that the "new Sheens" was "more like the meth" or "synthetic meth" than like synthetic cocaine. J.A. 62-64, 68-70; see J.A. 69 (petitioner describing the "new Sheens" as giving "a harder hit to a shorter period of time"); J.A. 75 ("I added a little extra kick to it"); J.A. 77 (petitioner asking McDaniel whether her customers were using a product "for aromatherapy or are they putting it directly on a burner?"). See Pet. App. 5a-6a.

At times, petitioner sought to avoid explicit discussion about the nature of the substances he was selling. For example, when McDaniel asked petitioner which of his products was an alternative for methamphetamine, petitioner responded, "we don't talk about that, you know that." J.A. 84. Petitioner also spoke obliquely when advising McDaniel about which of his bath salts should be snorted or smoked. J.A. 77-78 ("[S]ome people like to put it directly on a burner and then it smokes. You know, you smoke," but for other substances "some people like to use it just as an aromatherapy to, you know, to smell it. * * * You

know what I mean? * * * [I]t depends on usage which chemical I would send you.").

With McDaniel's assistance, investigators purchased bath salts from petitioner on five occasions in 2011 and 2012. Pet. App. 6a; J.A. 61-93. Testing confirmed that the bath salts contained MDPV, MDMC, and 4-MEC. Pet. App. 6a.

In February 2012, officers arrested petitioner and executed a search warrant at his New York business. Gov't C.A. Br. 11. A number of bath salts were recovered, submitted for laboratory analysis, and determined to contain 4-MEC. *Ibid.* Petitioner's personal computer also was seized and subsequently searched. *Ibid.* E-mails on the computer demonstrated that petitioner had attempted to disguise the true nature of his business. J.A. 94-97. For example, in one e-mail to a customer who was searching for bath salts on petitioner's website, petitioner wrote, "look at green valley oils, it's a front for the hardball." J.A. 95-96. In another e-mail, petitioner told a customer to look for a product "under the Green Valley Oils with the Hardball Aromatherapy trying to put some shade on it." J.A. 95.

3. a. On November 14, 2012, a federal grand jury sitting in the Western District of Virginia returned a superseding indictment charging petitioner with one conspiracy count and eight substantive counts related to his distribution of substances containing the controlled substance analogues MDPV, MDMC, and 4-MEC. Pet. App. 6a.

In addition to other evidence—including transcripts of the ,recorded telephone conversations between petitioner and McDaniel—the government presented at trial the testimony of two expert wit-

nesses: DEA chemist Dr. Thomas DiBerardino, and DEA drug science specialist Dr. Cassandra Prioleau. Pet. App. 7a.

With respect to MDPV, Dr. DiBerardino testified that it has a chemical structure that is substantially similar to methcathinone, a Schedule I controlled substance, and that phenethylamine is the core chemical structure for both methcathinone and MDPV. Pet. App. 7a; Gov't C.A. Br. 13-14. Turning to 4-MEC (methylethylcathinone), Dr. DiBerardino explained that its chemical structure is also substantially similar to the chemical structure of methcathinone, that both substances are part of the phenethylamine core chemical family, and that their minor chemical structural difference is so slight as to make them chemically substantially similar. Pet. App. 7a; Gov't C.A. Br. 13-14. Finally, focusing on MDMC, Dr. DiBerardino testified that that substance is chemically substantially similar to MDMA, also known as ecstasy, a Schedule I controlled substance. Pet. App. 7a; Gov't C.A. Br. 14. Dr. DiBerardino explained that both MDMC and MDMA have phenethylamine as their core chemical structure, and, using chemical structure overlays for both MDMC and MDMA, he described to the jury how the minor chemical structural differences between the two substances are so slight as to make them chemically substantially similar. Gov't C.A. Br. 14.

Dr. Prioleau testified about the pharmacological similarities between the substances at issue and controlled substances. Pet. App. 7a. She testified that 4-MEC and MDPV each produces a stimulant effect on the central nervous system that is substantially similar to that produced by methcathinone, the controlled

substance to which they are chemically similar. *Id.* at 7a-8a. She also testified that MDMC produces a stimulant effect on the central nervous system that is substantially similar to that produced by MDMA (ecstasy), the controlled substance to which it is chemically similar. *Ibid.*

The government also introduced the testimony of a former methamphetamine addict, Toby Sykes, who had purchased bath salts from McDaniel. J.A. 55-56; Pet. App. 17a. He testified that he ingested the bath salts by injecting them, and that the bath salts were "ten times more potent than meth has ever been." J.A. 55-56.

b. Petitioner asked the district court to use the following jury instruction on the term "knowingly":

> You may find that the defendant knowingly participated in a conspiracy to distribute controlled substance analogues, and that he knowingly distributed controlled substance analogues, if you find beyond a reasonable doubt that he knew that the substances that he was distributing possessed the characteristics of controlled substance analogues—that is, that he knew that:
>
> 1. The chemical structure of the substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act;
>
> 2. The substance has an actual, intended or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central

nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; and

3. The substance would be consumed by humans.

J.A. 29-30.

The government's proposed instruction would have informed the jury that it needed to find that petitioner "knowingly and intentionally distributed a mixture or substance," that "the mixture or substance was a controlled substance analogue," and that petitioner "distributed the controlled substance analogue with the intent that it be consumed by humans." J.A. 26-27. The government's proposed instruction further explained that:

> [T]o prove that a mixture or substance is a controlled substance analogue, the Government must prove the following beyond a reasonable doubt:
>
> One: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act; and
>
> Two: That the mixture or substance had an actual stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; or that the defendant represented or intended that the substance have [such an effect].

J.A. 27-28.[1]

The district court rejected the substance of petitioner's proposed instruction in part, declining to instruct the jury that it had to find that petitioner knew that the substances he was distributing were substantially similar in chemical structure to controlled substances. See Pet. App. 58a (district court opinion explaining that it declined to include petitioner's instruction that the jury must find "that he knew that the alleged analogues have a chemical structure that is substantially similar to the chemical structure of a controlled substance"); C.A. App. 670-671 (district court expressing its "agree[ment] basically with [petitioner's] assertion that there has to be some measure of intent proven by the government beyond a reasonable doubt on the part of [petitioner]," while acknowledging that its instruction "may not be the precise instruction that [petitioner] ha[d] proposed"). The district court also rejected the substance of the government's proposed instruction in part—in particular, the court rejected the portion of the government's proposed instruction that would not have required the jury to find that petitioner knew that the relevant substances have pharmacological effects that are substantially similar to those of controlled substances. See J.A. 40 (instruction as given).

In the end, the district court's compromise instruction explained, *inter alia*, that the government had to prove the following elements beyond a reasonable doubt:

---

[1] The government's proposed conspiracy instruction was materially identical. J.A. 24-26.

> FIRST: That the defendant knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act;
>
> SECOND: That the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act;
>
> AND
>
> THIRD: That the defendant intended for the mixture or substance to be consumed by humans.

J.A. 40.

c. The jury found petitioner guilty of each of the nine counts alleged in the indictment. Pet. App. 9a, 28a-32a. In denying petitioner's subsequent motion for a judgment of acquittal, *id.* at 44a-68a, the district court rejected petitioner's claim that the jury instructions were erroneous, *id.* at 54a-60a. The court stated that petitioner's requested scienter instruction as to similarity of chemical structure was "not required by the statute or Fourth Circuit precedent." *Id.* at 58a (citing *United States* v. *Klecker*, 348 F.3d 69, 71-72 (4th Cir. 2003), cert. denied, 541 U.S. 981 (2004)).

d. The district court sentenced petitioner to a below-Guidelines sentence of 33 months of imprisonment, to be followed by 30 months of supervised release. Pet. App. 33a, 35a; C.A. App. 889.

4. The court of appeals affirmed. Pet. App. 1a-27a. As relevant here, the court of appeals held that the district court did not abuse its discretion in declining to adopt petitioner's proposed instruction. *Id.* at 21a-22a. The court noted that petitioner could not demonstrate that his proposed instruction was correct because circuit precedent did not require the government to prove in Analogue Act cases that the defendant "knew, had a strong suspicion, or deliberately avoided knowledge that the alleged [controlled substance analogues] possessed the characteristics of controlled substance analogues." *Ibid.* The court relied on *Klecker*, in which a panel of the Fourth Circuit had explained that:

> In order to show an Analogue Act violation, the Government must prove (1) substantial *chemical* similarity between the alleged analogue and a controlled substance, *see* 21 U.S.C.A. § 802(32)(A)(i); (2) actual, intended, or claimed *physiological* similarity (in other words, that the alleged analogue has effects similar to those of a controlled substance or that the defendant intended or represented that the substance would have such effects), *see id.* § 802(32)(A)(ii), (iii); and (3) *intent* that the substance be consumed by humans, *see id.* § 813.

348 F.3d at 71. The court of appeals declined to adopt the more rigorous knowledge requirement adopted by the Seventh Circuit in *Turcotte*, *supra*.[2]

---

[2] The court of appeals also rejected petitioner's arguments that the Analogue Act is unconstitutionally vague as applied to him, Pet. App. 9a-16a; that the district court committed evidentiary errors, *id.* at 16a-20a; and that the evidence was insufficient to

SUMMARY OF ARGUMENT

The government need not prove in every Analogue Act case that the defendant knew that the substance he distributed satisfied each of the definitional elements of a controlled substance analogue set forth in 21 U.S.C. 802(32)(A). The district court correctly rejected petitioner's request for a jury instruction requiring such proof and the court of appeals correctly affirmed petitioner's convictions.

A. Petitioner's argument that the Analogue Act's mental-state requirement must be governed by the CSA's mental-state requirement is correct, but the conclusion petitioner draws from it is not. Section 841(a) of the CSA makes it illegal to, *inter alia*, knowingly distribute a controlled substance. Section 841(b), in turn, specifies penalty levels based on the amount and type of controlled substance at issue. Courts of appeals have correctly concluded that the "knowingly" requirement in Section 841(a) of the CSA applies only to the elements listed in that subsection—and not to the elements (including type of controlled substance) listed in Subsection (b) of the same statutory provision. Because "a controlled substance analogue shall * * * be treated, for the purposes of any Federal law as a controlled substance in schedule I," 21 U.S.C. 813, the same approach applies for controlled substance analogues under the Analogue Act. That is, under Section 841(a), the government must prove, *inter alia*, that the defendant knowingly distributed a controlled substance analogue. But that is all that is required to satisfy the Analogue Act's mental-state requirement. Just as there is no independent

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support his convictions, *id.* at 22a-26a. Petitioner does not renew those claims in this Court.

requirement under the CSA that a defendant know any aspect of the definition of controlled substance contained in Section 841(b), there is likewise no independent requirement that a defendant under the Analogue Act "know" the definitional elements contained in Section 802(32)(A), an entirely separate provision of the Code. Knowledge that one is distributing a controlled substance analogue is enough.

That brings us to the heart of this case: How does the government prove the relevant knowledge? Under the CSA, the courts of appeals agree that the government may satisfy the mental-state requirement in alternative ways. The government may prove that a defendant knew the identity of the controlled substance (*e.g.*, heroin) he distributed. Or the government may prove that a defendant knew that he distributed a regulated or illegal substance even if he did not know which substance it was or why the substance was illegal. In arguing that the government must always prove that an Analogue Act defendant had knowledge of the chemical structure of the substance he distributed, petitioner conflates those alternative methods of proof.

In a traditional CSA prosecution under 21 U.S.C. 841(a), the government may prove that a defendant knowingly distributed a controlled substance by proving that he knew the identity (*i.e.*, name) of the substance he distributed. In the Analogue Act context, the government cannot satisfy the knowledge-of-identity method by proving that a defendant knew the name of the substance he distributed because controlled substance analogues, unlike controlled substances, are not identified by name in statute or regulation. They are instead identified by the characteris-

tics listed in the definition of "controlled substance analogue" in 21 U.S.C. 802(32)(A). Thus, in order to prove an Analogue Act case under a knowledge-of-identity theory, the government must prove that a defendant knew of the characteristics of the substance that make it illegal, including its chemical structure.

Petitioner spends much of his brief explicating and defending the knowledge-of-identity theory. As every court of appeals has recognized (and as petitioner seems to acknowledge), however, the government may also rely on the alternative knowledge-of-regulated-status theory to satisfy the CSA's mental-state requirement. Under that theory, the government need not prove a defendant knew the identity of the drug at issue, but merely that he knew that he distributed a regulated or illegal substance. The same theory is available in an Analogue Act case. To show that the defendant knowingly distributed a controlled substance analogue under a knowledge-of-regulated-status theory, the government need not prove that the defendant knew the chemical structure of the drug at issue. The government need only prove that the defendant knew he was dealing with an illegal or regulated substance.

Methods of proof, not just theories of proof, map from the CSA to the Analogue Act. Petitioner concedes that the government may prove knowledge of regulated status under the CSA with circumstantial evidence of, *e.g.*, a defendant's efforts to conceal his actions and his knowledge of the effects of the substance he distributed. The same is true under the Analogue Act. A jury is entitled to infer knowledge of illegality or regulated status from evidence of a defendant's furtive actions or his knowledge or repre-

sentation about a substance's pharmacological effects. Such an approach is consistent with the Analogue Act's purpose, which was to prevent both the manufacture and the distribution of dangerous drugs not yet included on published schedules.

B. Petitioner argues at length that the Analogue Act is unconstitutionally vague: in all prosecutions under the Analogue Act, he argues, the government must prove that the chemical structure of the substance distributed by the defendant is "substantially similar" to the chemical structure of a controlled substance, and petitioner contends that the term "substantially similar" has no settled scientific meaning. Petitioner did not include a vagueness challenge in his petition for a writ of certiorari, although the court of appeals had considered and rejected such an argument. Nor is vagueness fairly encompassed in the question presented, which focuses exclusively on the mental-state requirement under the Analogue Act. The Court should therefore decline to consider petitioner's vagueness arguments. In any event, those arguments are unpersuasive and have been rejected by every court of appeals to consider them.

The Court should also reject petitioner's attempt to smuggle his vagueness argument into the case in the guise of a constitutional-avoidance argument. Even if the Court were to take petitioner's erroneous vagueness arguments as valid, they would not counsel in favor of requiring proof of a defendant's knowledge that the substance he distributed was substantially similar in chemical structure to a controlled substance. Although a scienter requirement can alleviate a statute's vagueness when the statutory standard is difficult to apply, the same is not true when the statu-

tory standard is entirely indeterminate. If, as petitioner contends, the concept of substantial similarity in chemical structure is meaningless in all of its applications, requiring a defendant to *know* something meaningless would do nothing to mitigate any vagueness. Constitutional avoidance thus provides no basis for choosing petitioner's approach over the government's.

C. Although the district court did not explicitly instruct the jury that it could convict petitioner if it found that he knew the substances he distributed were regulated or illegal, the court of appeals correctly affirmed petitioner's convictions both because the district court's instructions materially encompassed the correct theory of proof and because the evidence before the jury overwhelmingly established that petitioner knew he was dealing in illegal or regulated substances. That evidence included his own representations about the effects of the drugs he sold, the manner in which he sold them, the price he demanded for them, and his attempts to conceal his activities.

Finally, we acknowledge that the reasons offered by the court of appeals for affirming the district court's rejection of petitioner's proposed instruction requiring proof of knowledge of chemical structure were erroneous. The court of appeals, relying on circuit precedent, reasoned that the only mental-state requirement for an Analogue Act violation is a defendant's intent that the substance be for human consumption. Because that standard eliminates the mental-state requirement under Section 841(a)—that is, it eliminates the requirement that the defendant knowingly distributed a controlled substance analogue—it is incorrect. But this Court reviews

judgments, not opinions. And affirmance is appropriate here because the court of appeals correctly affirmed both petitioner's Analogue Act (and conspiracy) convictions and the district court's refusal to use petitioner's instruction on knowledge of chemical structure.

ARGUMENT

THE DISTRICT COURT CORRECTLY DECLINED TO INSTRUCT THE JURY THAT THE GOVERNMENT HAD TO PROVE THAT PETITIONER KNEW THE SUBSTANCES AT ISSUE WERE SUBSTANTIALLY SIMILAR IN CHEMICAL STRUCTURE TO CONTROLLED SUBSTANCES

Petitioner argues that, in every Analogue Act prosecution, the government must prove that the defendant knew that the substance he was distributing satisfied each element of the statutory definition of "controlled substance analogue," including the fact that the substance's chemical structure is substantially similar to that of a controlled substance. That is incorrect. The mental-state requirement in the CSA, 21 U.S.C. 841(a)—which the government and petitioner agree must govern Analogue Act cases—does not carry over to the definitional elements listed in 21 U.S.C. 802(32)(A). The district court therefore correctly rejected petitioner's requested instruction to that effect, as the court of appeals held.[3]

---

[3] Although the court of appeals correctly affirmed petitioner's convictions, as explained at pp. 45-46, *infra*, it erred in its explanation for why the district court's instructions correctly captured the Analogue Act's mental-state requirement. Because that error did not affect the outcome of the case, the court of appeals' judgment should be affirmed.

A. The CSA's Mental-State Requirements Must Be Adapted To Govern Violations Of The Analogue Act

Petitioner argues (Br. 21-25) that violations of the Analogue Act must be governed by the mental-state requirement that courts have universally found in the CSA, 21 U.S.C. 841(a)—namely, that a defendant must have known[4] that the substance he possessed or distributed was controlled or regulated, "that is, that the substance 'was some kind of prohibited drug.'" Pet. Br. 21-22 (quoting *United States* v. *Turcotte*, 405 F.3d 515, 525 (7th Cir. 2005), cert. denied, 546 U.S. 1089 (2006)). That is correct. Petitioner goes on, however, to argue that knowledge of illegality or regulated status is insufficient for an Analogue Act violation, which instead (in petitioner's view) always requires proof of knowledge of the chemical structure of the substance at issue. That is incorrect. Petitioner's argument conflates two different theories of proof under the CSA. It likewise fails to take account of the differences, including differences in structure, between the CSA and the statutes that define an Analogue Act violation. Petitioner's contention that the government must always prove knowledge of a substance's chemical structure in order to prove that a

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[4] As petitioner has conceded (Br. 33; J.A. 30), knowledge may be established with proof of willful blindness or recklessness, including proof of a defendant's strong suspicion of illegality. See, *e.g.*, *United States* v. *Orta-Rosario*, 469 Fed. Appx. 140, 146-147 (4th Cir.), cert. denied, 133 S. Ct. 311 (2012); *United States* v. *Bansal*, 663 F.3d 634, 669 (3d Cir. 2011), cert. denied, 132 S. Ct. 2700 and 133 S. Ct. 225 (2012); *United States* v. *Heredia*, 483 F.3d 913, 922-923 & n.13 (9th Cir.), cert. denied, 552 U.S. 1077 (2007); see also *Global-Tech Appliances, Inc.* v. *SEB S.A.*, 131 S. Ct. 2060, 2068-2069 (2011).

defendant knew he was distributing a regulated drug in an Analogue Act case should therefore be rejected.

1. The government may establish a violation of the Analogue Act by proving that a defendant knew he was dealing with a regulated or illegal drug

a. The CSA makes it unlawful, *inter alia*, for "any person knowingly or intentionally * * * to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense, a controlled substance." 21 U.S.C. 841(a)(1). Penalties for a violation of the CSA are calibrated to the amount and type of the controlled substance at issue, 21 U.S.C. 841(b). As this Court has explained, the CSA "establishes five categories or 'schedules' of controlled substances" with "[v]iolations involving schedule I substances carry[ing] the most severe penalties, as these substances are believed to pose the most serious threat to public safety." *Touby* v. *United States*, 500 U.S. 160, 162 (1991).

Over the last 30 years, Congress has utilized different statutory means to combat drug traffickers who "take advantage" of the CSA's requirement that a controlled substance be included on a published schedule "by designing drugs that were similar in pharmacological effect to scheduled substances but differed slightly in chemical composition, so that existing schedules did not apply to them." *Touby*, 500 U.S. at 163. In 1984, for example, Congress authorized the Attorney General to temporarily schedule a substance when "necessary to avoid an imminent hazard to the public safety." *Ibid.* (quoting 21 U.S.C. 811(h)). In 1986, after learning that drug traffickers continued to stay one step ahead of the controlled-substance schedules, Congress enacted the Analogue Act. See

H.R. Rep. No. 848, 99th Cong., 2d Sess. 5 (1986) (House Report); see also S. Rep. No. 196, 99th Cong., 1st Sess. 1-3 (1985) (Senate Report). Congress concluded that the pre-existing statutory scheme was insufficient "to regulate the flow of illicit drugs" and that, in particular, "[t]he emergency scheduling procedure * * * is entirely reactive and can only operate after a controlled substance analog has already been shown to pose a severe risk to the public health." Senate Report 1-2.

The Analogue Act specifies that "[a] controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I." 21 U.S.C. 813. As noted, the CSA makes it illegal to knowingly or intentionally possess or distribute a controlled substance. 21 U.S.C. 841(a)(1). Read together, the Analogue Act and the CSA make it illegal to knowingly or intentionally possess or distribute a controlled substance analogue when intended for human consumption. On that, petitioner and the government agree. Petitioner and the government also agree with the unanimous view of the courts of appeals that the government may prove a violation of the CSA by proving that a defendant knew he possessed (or distributed, etc.) an illegal drug (*i.e.*, a controlled or regulated substance not used in a permissible manner), even if he did not know what the substance was and even if he was mistaken about which controlled substance it was. See Pet. Br. 21-22 & n.11 (collecting cases from every circuit).

The question in this case is how the CSA's mental-state requirement should apply in Analogue Act cases. Petitioner seems to agree (Br. 23) that the require-

ment under the CSA that the government prove that a defendant knew he possessed a controlled substance cannot be the standard for Analogue Act cases—because the Analogue Act specifically defines "controlled substance analogue" to *exclude* controlled substances. 21 U.S.C. 802(32)(C)(i); see *Turcotte*, 405 F.3d at 526 ("[A]pplying the standard requirement that a defendant must know the substance in question is a 'controlled substance' is nonsensical since controlled substance analogues are, by definition, not 'controlled substances.'"). The CSA's mental state requirement must therefore be adapted to suit the somewhat different statutory structure of the Analogue Act.

b. Although petitioner endorses (Br. 21-22 & n.11) the widely accepted view that the government may establish a violation of the CSA by proving that a defendant knew that he possessed a regulated drug, he errs in adapting that rule to the Analogue Act context. Courts of appeals have relied on the statutory structure of the CSA to hold that the government need not prove that a defendant knew which controlled substance he possessed as long as it proves that he knew he was dealing with some sort of regulated, controlled, or illegal drug. The First Circuit has explained:

> Subsection (a) [of 21 U.S.C. 841] identifies a crime that stands on its own: knowing possession of a controlled substance with intent to distribute. Subsection (b) then lays out a series of progressive penalties, the severity of which depend, among other things, on drug type. From this binary structure, courts reasonably have inferred that Congress intended the scienter requirement in section

> 841(a) to apply to the blanket category 'controlled substances' and not to the identity of the specific drug involved in the offense.

United States v. *Hussein*, 351 F.3d 9, 19 (2003) (citing cases).

In other words, the "knowingly" requirement in 21 U.S.C. 841(a) applies *only* to the aspects of the CSA violation included in Section 841(a) and not to other aspects of the CSA violation contained in Section 841(b), such as the identity or quantity of the controlled substance. The mental state set forth in Section 841(a) does not "carry over" to Section 841(b). Instead, any additional mental-state requirement as to the identity of the particular substance at issue must come from Section 841(b) itself—and that provision contains no reference to a defendant's state of mind.

Although the "knowingly" requirement in 21 U.S.C. 841(a) applies only to the elements in that subsection (and not to the elements in, *e.g.*, Subsection (b)), petitioner contends (Br. 35-40) that, when applied to the Analogue Act, Section 841(a)'s "knowingly" requirement must carry over to elements identified in entirely separate statutory provisions. In particular, petitioner argues (Br. 35-40) that Section 841(a)'s "knowingly" standard applies to every aspect of the definition of a controlled substance analogue in 21 U.S.C. 802(32)(A). Nothing in the text or structure of the provisions at issue supports such an expansion of the CSA's scienter requirement when applied to Analogue Act cases.

Petitioner relies primarily on this Court's decision in *Flores-Figueroa* v. *United States*, 556 U.S. 646 (2009), in which the Court held that, when a statutory provision identifies a series of statutory elements *in*

one sentence and introduces that sentence with a mental-state requirement like "knowingly," the requisite mental state applies to each element in the list. *Id.* at 650. But that principle has no application here. As discussed, the courts of appeals have uniformly held that the "knowingly" requirement in Section 841(a) applies only to the elements listed in that subsection, but not to elements identified elsewhere in the statutory scheme. Petitioner strongly endorses that interpretation of the CSA (as does the government), and it is consistent with the holding of *Flores-Figueroa*, where every element in the statute at issue was found in the same sentence of the same statutory provision. In the Analogue Act context, there is even less reason to extend the mental-state requirement of Section 841(a) to the definitional elements in Section 802(32)(A) because those elements appear in an entirely different section of the Code. If petitioner agrees that the "knowingly" requirement of Section 841(a) does not apply to Section 841(b), no reason would support extending it to Section 802(32)(A).

It is particularly inappropriate to import Section 841(a)'s scienter requirement into other provisions that define an Analogue Act violation because those provisions contain their own distinct mental-state requirements. Section 813, for example, specifies that a controlled substance analogue shall be treated as a controlled substance only "to the extent intended for human consumption." 21 U.S.C. 813. The definition in Section 802(32)(A), in turn, includes a mental-state requirement only for cases in which the defendant "represents or intends" that the substance "have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar"

to that of a Schedule I or II controlled substance. 21 U.S.C. 802(32)(A)(iii). In contrast, the other prongs of the definition—the chemical-structure prong in paragraph (i) and the pharmacological-effect prong in paragraph (ii)—do not refer to the defendant's mental state. The juxtaposition of express mental-state elements in some of the provisions that define an Analogue Act violation suggests that the omission of a mental-state requirement in the other provisions was intentional. "Where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion." *Bates* v. *United States*, 522 U.S. 23, 29-30 (1997) (quoting *Russello* v. *United States*, 464 U.S. 16, 23 (1983)). Thus, nothing in the text of Sections 802(32)(A) or 813 suggests that the mental-state requirement of Section 841(a) carries through to every element of an Analogue Act violation.

In sum, petitioner is correct that the government can prove a violation of the Analogue Act by proving that a defendant knew that he possessed an illegal or regulated drug.[5] As discussed more fully in Section A.2, *infra*, however, petitioner errs in insisting that such knowledge can be established only with proof that the defendant knew the chemical structure of the controlled substance analogue.

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[5] A conviction for an Analogue Act violation also requires proof of other elements, including, *e.g.*, that the substance involved was in fact a controlled substance analogue. Because the dispute in this case now concerns only what mental state the government must prove to establish an Analogue Act violation, this brief does not discuss the other elements required for a conviction.

2. The government need not prove that a defendant charged with violating the Analogue Act knew the substance he possessed was substantially similar in chemical structure to a controlled substance

Because both parties agree that the government can prove a defendant committed an Analogue Act violation by proving that he knew he was dealing with an illegal or regulated drug, the question then posed is *how* the government can prove that. Petitioner insists that the only way to make such a showing is to prove that a defendant knew of each of the drug's characteristics that made his possession or distribution of it illegal. But that is not the rule under the CSA, and nothing in the Analogue Act would justify imposing such a heightened standard of proof.

a. Under the CSA, the government has two ways to prove that a defendant knowingly distributed a controlled substance. First, under a "knowledge of identity" approach, if the government has proof that a defendant knew the identity (*i.e.*, name) of the substance he distributed (and the substance is in fact listed on a schedule), that is sufficient to prove that he knowingly distributed a controlled substance. *E.g.*, *Hussein*, 351 F.3d at 19 ("In most cases," the government may satisfy Section 841(a)'s mental-state requirement "by proving that the defendant knew the specific identity of the controlled substance that he possessed."). If the defendant knows he distributed heroin, that suffices even if he has no idea that heroin is listed as a Schedule I substance.

Second, under the "knowledge of regulated status" approach, a defendant can be found guilty of distributing, *e.g.*, "magic mushrooms" if he knows that they are illegal or regulated; and that is so even if he does

not know that the reason magic mushrooms are regulated is that they contain psilocybin and psilocin, two substances included on Schedule I. 21 C.F.R. 1308.11(d)(29) and (30); see *United States* v. *Hassan*, 578 F.3d 108, 121 n.5 (2d Cir. 2008); see also, *e.g.*, *United States* v. *Ali*, 735 F.3d 176, 188-190 (4th Cir. 2013), cert. denied, 134 S. Ct. 135 (2014); *United States* v. *Ramirez-Ramirez*, 875 F.2d 772, 774 (9th Cir. 1989); *United States* v. *Gonzalez*, 700 F.2d 196, 200-201 (5th Cir. 1983); *United States* v. *Lewis*, 676 F.2d 508, 512 (11th Cir.), cert. denied, 459 U.S. 979 (1982); *United States* v. *Morales*, 577 F.2d 769, 776 (2d Cir. 1978).

b. i. Petitioner does not contest that the CSA permits these two methods of proving the requisite knowledge. However, invoking a line of cases holding generally that a statute criminalizing knowing conduct requires proof that a defendant had knowledge of the facts, though not necessarily the law, that made his conduct illegal, petitioner contends (Br. 27) that a conviction for distributing a controlled substance analogue requires knowledge of the alleged analogue's chemical structure. That argument conflates the two different theories of proof under the CSA. As applied to the Analogue Act, knowledge of chemical structure is required only when the government proceeds under the knowledge-of-identity approach, but not when it pursues the knowledge-of-regulated-status approach.

Petitioner is correct that knowledge of the chemical structure of the controlled substance analogue is required when the government proceeds under a knowledge-of-identity theory. In the CSA context, that method of proof applies when the evidence shows that a defendant knew the identity of the controlled

substance he possessed. Because controlled substances are identified by name on published schedules, a defendant who knows the name of the controlled substance in his possession has knowledge of the facts that make his conduct illegal even if he does not know that the substance is included on a schedule and even if he does not know that it is illegal.[6]

In the Analogue Act context, the government cannot prove knowledge of identity by proving that a defendant knew the name of the substance he distributed—controlled substance analogues are identified by their features, as set forth in the statutory definition in 21 U.S.C. 802(32)(A), rather than by name in published schedules. In that way, the proof requirements under the Analogue Act necessarily differ from those under the CSA. But the government can rely on an adapted version of the CSA's knowledge-of-identity proof standard by proving a defendant's knowledge of the characteristics in the statutory definition of a controlled substance analogue. That definition includes the requirement that the chemical structure of the controlled substance analogue be "substantially similar to the chemical structure of a controlled substance in schedule I or II." 21 U.S.C. 802(32)(A)(i). And the defendant must know of the substantial similarity to be convicted under this approach.

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[6] In some cases, a substance qualifies as a controlled substance because one or more of its chemical components is included on a schedule. In those cases, a defendant who knows both the identity of the chemical component and that the component is present in the substance he possesses would have knowledge of the facts that make his conduct illegal.

ii. But that is not the only permissible approach. Petitioner agrees that the mens rea requirement for the Analogue Act comes from Section 841(a). And it is clear that under the knowledge-of-regulated-status approach a defendant may be properly convicted of a CSA offense upon proof that he knew that the substance he distributed was regulated or illegal, whether or not he knew exactly what the substance was. The same is true under the Analogue Act: a defendant can be convicted for distributing MDPV, MDMC, or 4-MEC based on proof that he knew those substances are illegal or regulated; and that is so even if he did not know exactly *why* (*i.e.*, under what statutory or regulatory scheme) that is so. In other words, if the government proves that an Analogue Act defendant knows he is distributing a regulated or illegal substance, it need not also prove that the defendant knows the drug is substantially similar in chemical structure and pharmacological effect to a controlled substance. It is enough that the defendant knew he possessed a controlled substance even if he did not know the fact that made the substance controlled (*i.e.*, its identity). The same is true of an Analogue Act offender: if he knew he possessed an illegal or regulated substance, he is guilty even if he did not know the facts that made his possession of the substance illegal. See *Hussein*, 351 F.3d at 19-20 (describing both methods of proof under the CSA).

iii. Petitioner concedes (Br. 33) that knowledge of illegality or regulated status may be proved for purposes of the CSA with circumstantial evidence, including, *e.g.*, evidence of a defendant's furtive conduct. The same is true under the Analogue Act. See *United States* v. *Santos*, 553 U.S. 507, 521 (2008) (opinion of

Scalia, J.) (noting that knowledge "must almost always be proved" with "circumstantial evidence"). The government can satisfy Section 841(a)'s knowledge-of-regulated-status standard in the Analogue Act context by relying on circumstantial evidence that the defendant knew he was dealing with a regulated or illegal substance. Such evidence might include evidence that a defendant concealed his drug-related activities. See, *e.g.*, *United States* v. *Abdulle*, 564 F.3d 119, 127 (2d Cir. 2009) (Sotomayor, J.). Or it might include evidence of a defendant's "familiarity with [the drug's] effects on the central nervous system, the efforts [he] employed to avoid detection, and the method and amount of remuneration that he will receive for his role." *Hussein*, 351 F.3d at 20; see *Ali*, 735 F.3d at 189 (noting that juries may rely on evidence of a defendant's evasive behavior and knowledge that a substance "produces a high much like other controlled substances" to infer knowledge of regulated status). But the government need not always produce evidence that a defendant knew the substance's chemical structure was substantially similar to that of a controlled substance.

c. Extending the CSA's knowledge-of-regulated-status standard to Analogue Act offenses without requiring proof of chemical-structure knowledge furthers the purposes of the Analogue Act. Congress sought to stop the scourge of so-called "designer drugs," *i.e.*, drugs made from altering illegal drugs "in order to create new drugs that are similar to their precursors in effect but are not subject to the restrictions imposed on controlled substances." *United States* v. *Klecker*, 348 F.3d 69, 70 (4th Cir. 2003), cert. denied, 541 U.S 981 (2004); see *United States* v.

Hodge, 321 F.3d 429, 437 (3d Cir. 2003) ("The Analogue Act's purpose is to make illegal the production of designer drugs and other chemical variants of listed controlled substances that otherwise would escape the reach of the drug laws."); *Turcotte*, 405 F.3d at 523 (similar). The legislative history repeatedly references the creators and distributors of designer drugs who are at the heart of the problem. See, *e.g.*, Senate Report 1, 3, 6; House Report 2, 5. The legislative history also emphasizes the need for "swift investigation and prosecution" of such distributors of designer drugs. House Report 2; see Senate Report 3 ("Strong measures are needed to attack this problem.").

Petitioner offers two arguments in response. First, he contends (Br. 29-30) that, in enacting the Analogue Act, Congress sought to target only the chemists who create the designer drugs covered by the Analogue Act. To be sure, Congress sought in part to rein in the "underground chemists" responsible for the new and ever-changing chemical combinations. *Klecker*, 348 F.3d at 70. But the congressional reports accompanying the bills that produced the Analogue Act leave little doubt that Congress's legislative purpose was broader than simply targeting chemists. Congress also sought to more effectively "regulate the flow of illicit drugs" generally and to avoid "severe risk[s] to the public health," including by targeting "drug dealers" and "drug traffickers." Senate Report 1-2, 6; see *id.* at 3 (noting that analogues "could present a 'public health disaster'" and do "present a clear and present danger to our society"). That purpose is reflected in the plain text of the statutory scheme, which prohibits all "knowing[]" distribution (or possession with intent to distribute) of controlled substance analogues. 21

U.S.C. 813, 841(a)(1). Petitioner's counter-textual "chemists only" limitation makes little sense in light of Congress's purpose of staying ahead of (or at least trying to keep up with) innovation in the illegal drug world. Limiting the reach of the Analogue Act in the manner petitioner urges would frustrate efforts to prevent the distribution of these dangerous drugs to the public by immunizing street-level dealers and thereby complicating the identification and prosecution of upstream drug chemists and wholesalers who insulate themselves through multiple organizational levels.

Second, petitioner contends (Br. 40-42) that Congress could not have wanted to target the range of "innocent conduct" that petitioner believes a broad reading of the Analogue Act would encompass. Under the government's interpretation of the statutes defining an Analogue Act violation (as set forth in this brief), however, the Analogue Act does not punish innocent conduct. The proprietor of a vitamin store, for example, would not violate the Analogue Act by selling supplements that contain a controlled substance analogue unless he either knew that the product contained a substance satisfying the definitional elements in Section 802(32)(A) or knew that the product contained a regulated or illegal substance (a fact that could be established with circumstantial evidence, including evidence that he told customers that the supplement would make them feel as if they had ingested cocaine). Nor would the innocent Girl Scout petitioner posits (Br. 40) be at risk, because she would not be aware that her cookies had been adulterated or were illegal in any way. Of course, if the evidence showed that a different Girl Scout sold brownies pack-

aged in little baggies in a dark alley for $50 each while using a code name and informing her customers that the brownies would get them high, a jury could convict her under the Analogue Act if the brownies contained a controlled substance analogue, and that would be true even if the Girl Scout lacked knowledge of the chemical structure of the ingredients that the brownies contained.

B. Petitioner's Assertions Of Vagueness Do Not Support His Insistence On Proof Of A Defendant's Knowledge Of Chemical Structure

In his petition for a writ of certiorari, petitioner did not ask this Court to review his argument (which was rejected by the court of appeals) that the Analogue Act is unconstitutionally vague. See Pet. i. Nor is that argument fairly encompassed in the question presented. Nevertheless, petitioner devotes 13 pages of his brief (Br. 43-55) to arguing that the Analogue Act is unconstitutionally vague, tacking on a little more than one page at the end (Br. 56-57) in an effort to cloak his vagueness argument in the garb of constitutional avoidance. Petitioner's efforts are unavailing.

1. Petitioner argues (Br. 43-55) that the requirement that an analogue have a chemical structure that is "substantially similar" to that of a controlled substance is unconstitutionally vague because most people—and in particular, most dealers and distributors of controlled substance analogues—will not know whether the drugs they are distributing have chemical structures that are substantially similar to those of controlled substances. That is so, he argues (Br. 43-52), both because non-scientists such as street dealers and intermediate distributers like petitioner generally do not have access to the scientific equipment needed

to assess chemical structure and because the phrase "substantially similar" has no settled meaning in the scientific community. As discussed below, petitioner's arguments are incorrect and should be rejected in any future case that actually presents the vagueness question. More to the point for this case: petitioner's vagueness arguments have no bearing on the Analogue Act's mental-state requirement.

This Court has recognized that "scienter requirements alleviate vagueness concerns." *Gonzales* v. *Carhart*, 550 U.S. 124, 149 (2007). But that principle can operate only if a statute has a discernable standard, even if that standard may be difficult to apply to particular cases. See *United States* v. *Williams*, 553 U.S. 285, 306 (2008) ("What renders a statute vague is not the possibility that it will sometimes be difficult to determine whether the incriminating fact it establishes has been proved; but rather the indeterminacy of precisely what that fact is."). Here, petitioner contends not merely that the "substantially similar" test is difficult to apply; he argues that it is entirely indeterminate—that it is vague to the core. If it is true, as petitioner and his amici argue (Br. 43-52; Expert Forensic Scientists Amicus Br. 11-14; NACDL Amicus Br. 7-8), that an individual who is distributing a controlled substance knock-off can never know whether that substance satisfies the statutory definition in the Analogue Act, then that problem will persist regardless of what mental-state requirement this Court finds in the statutes that define an Analogue Act violation. If petitioner were to prevail on his argument that the government must prove that a defendant knew that he was distributing a substance substantially similar in

chemical structure to a controlled substance, such a rule would do nothing to mitigate the vagueness problem of which petitioner complains. If petitioner is correct that a defendant can never know whether two substances are chemically similar, then requiring him to know that two substances are chemically substantially similar is a meaningless limit on the statute's reach. Because adopting petitioner's preferred mental-state requirement would not alleviate the constitutional problem that petitioner posits, his attempt to cast his vagueness argument as one of constitutional avoidance is misplaced.

2. On the merits, petitioner's vagueness argument would fail even if properly presented. The courts of appeals "considering this issue have unanimously held that the CSA's Analogue Provision is not unconstitutionally vague." *Turcotte*, 405 F.3d at 531; see *United States* v. *Bamberg*, 478 F.3d 934, 937-938 (8th Cir. 2007), cert. denied, 552 U.S. 1261 (2008); *United States* v. *Roberts*, 363 F.3d 118, 122-126 (2d Cir. 2004); *Klecker*, 348 F.3d at 71-72; *United States* v. *Desurra*, 865 F.2d 651, 653 (5th Cir. 1989). Notably, the Seventh Circuit held that, "even leaving aside the implications of our scienter ruling, the Analogue Provision seems to us sufficiently clear by its own terms." *Turcotte*, 405 F.3d at 531.

Petitioner principally argues (Br. 43-52) that the Analogue Act does not give potential defendants fair notice of what is prohibited because it uses the phrase "substantially similar." Congress frequently defines the scope of criminal activity with reference to objects or substances that are "similar" to other objects or substances. See, *e.g.*, 18 U.S.C. 232(5) (defining "explosive or incendiary device" to include "any explosive

bomb, grenade, missile, or similar device"); 18 U.S.C. 1507 (prohibiting the disruption of court proceedings by using a "sound-truck or similar device"); 18 U.S.C. 2241(b)(2) (defining aggravated sexual abuse to include crimes in which the victim's faculties were compromised by administration of "a drug, intoxicant, or other similar substance"). The concept of similarity is not unique to the Analogue Act and is easily understood by lay jurors and defendants alike. Although petitioner cites some authority for the proposition that scientists are unfamiliar with the concept of "substantial similarity," the American Chemical Society informed the Congress that enacted the Analogue Act that "the term 'substantially similar' chemical structure is meaningful to scientists and capable of reasoned interpretation by the trier of fact." Senate Report 5. Nothing in the real-world application of the Act has proven that statement wrong. In particular, petitioner seems to suggest (Br. 19, 45-49) that the possibility that expert witnesses may disagree about the application of a legal concept to the facts of a particular case is a reason to hold that the legal concept is unconstitutionally vague. But criminal juries are frequently called upon to determine factual issues related to, *e.g.*, identity by weighing competing expert testimony about DNA, handwriting, and fingerprint evidence. Cf. *Holmes* v. *South Carolina*, 547 U.S. 319, 322-323 (2006) (describing criminal trial in which competing experts testified about DNA and fingerprint evidence). Defendants are protected in close cases by the requirement of proof beyond a reasonable doubt. *Williams*, 553 U.S. at 305-306.[7]

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[7] Petitioner complains that the Analogue Act is unfair to potential defendants because it provides them with insufficient notice of

In any case, to the extent any potential vagueness problem with the Analogue Act could, as petitioner argues, be ameliorated by adopting a particular mental-state requirement, that would be accomplished by adapting the CSA's knowledge-of-regulated-status standard to the Analogue Act context. As petitioner notes (Br. 56), this Court has repeatedly stated that "a scienter requirement may mitigate a law's vagueness, especially with respect to the adequacy of notice." *Posters 'N' Things, Ltd.* v. *United States*, 511 U.S. 513, 526 (1994) (quoting *Village of Hoffman Estates* v. *Flipside, Hoffman Estates, Inc.*, 455 U.S. 489, 499 (1982)).

Petitioner further errs in arguing (Br. 53-55) that the Analogue Act risks arbitrary enforcement and violates principles of separation of powers. Petitioner's only arbitrary-enforcement argument (see Br. 53) is that sometimes the government will succeed in convincing a jury that a particular substance qualifies as a controlled substance analogue and sometimes it will not. That unremarkable observation applies to a broad swath of determinations that are entrusted to

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what the Act requires. In the context of drug offenses (and other statutory public-welfare offenses), however, this Court has long held that Congress need not include *any* mental-state requirement at all. See, *e.g.*, *Staples* v. *United States*, 511 U.S. 600, 607 (1994); *United States* v. *Freed*, 401 U.S. 601, 607-610 (1971); *United States* v. *Behrman*, 258 U.S. 280, 288 (1922); *United States* v. *Balint*, 258 U.S. 250, 252-253 (1922); see *Boyce Motor Lines, Inc.* v. *United States*, 342 U.S. 337, 340 (1952) ("Nor is it unfair to require that one who deliberately goes perilously close to an area of proscribed conduct shall take the risk that he may cross the line."). Here, where Congress *has* included a "knowingly" requirement in the statutory scheme, petitioner's fairness complaint is particularly misguided.

juries in criminal cases. For example, one jury called upon to decide whether a defendant's behavior was reckless may disagree with another jury asked to decide the same question on materially identical facts. The potential for such disparate results is inherent in the jury system; it is not a sign of vagueness or the potential for arbitrary enforcement. The problem with vague statutory prohibitions, this Court has observed, is that "[a] vague law impermissibly delegates basic policy matters to policemen, judges, and juries for resolution on an *ad hoc* and subjective basis, with the attendant dangers of arbitrary and discriminatory application." *Grayned* v. *City of Rockford*, 408 U.S. 104 108-109 (1972). The Analogue Act does not ask law-enforcement officers, judges, or juries to make basic policy decisions. The Act instead asks juries to make basic factual determinations, some of which may require assessing competing testimony from expert witnesses. Again, that is the hallmark of our jury system, not the sign of a vague statute. For the same reason, petitioner's argument (Br. 54-55) that the Analogue Act raises separation of powers concerns must fail—because asking juries to make factual determinations in criminal cases is not the same as delegating legislative functions to juries.

C. The Court of Appeals Correctly Affirmed Petitioner's Convictions

Although the district court did not specifically instruct the jury that it could convict petitioner if it found that he knew he was distributing regulated or illegal substances, any error in that respect was harmless in light of the overwhelming evidence of petitioner's knowledge that his conduct was illegal.

1. As explained above, the district court did not abuse its discretion when it rejected petitioner's request that the jury be instructed that it could not convict petitioner without finding that he knew that the substances he was distributing were substantially similar in chemical structure to controlled substances. To the extent petitioner's challenge to his convictions rests on that ruling, his challenge should be rejected.

We acknowledge that the district court did not explicitly instruct the jury that it could convict petitioner of the Analogue Act violations if it found that he knew the substances he was distributing were regulated or illegal. Any instructional error does not warrant reversal of petitioner's convictions, however, because no rational jury could have concluded that petitioner did *not* know that the substances he was distributing were illegal or regulated drugs (even if he did not know which law made his distribution of them illegal). Thus, any instructional error was harmless beyond a reasonable doubt, and petitioner's convictions should be affirmed. See *Neder* v. *United States*, 527 U.S. 1, 8-10 (1999) (omission of an element from a jury instruction is subject to harmless-error analysis); see also, *e.g.*, *United States* v. *Mack*, 729 F.3d 594, 608 (6th Cir. 2013) (jury-instruction error is harmless when it is clear beyond a reasonable doubt that the outcome would not change had the jury been properly instructed), cert. denied, 134 S. Ct. 1338 (2014); *Turcotte*, 405 F.3d at 529 (affirming Analogue Act conviction on harmless-error grounds).

When petitioner knowingly sold "bath salts" containing MDPV, MDMC, and 4-MEC, he knew—in fact represented to his customers—that the substances, when ingested, would produce a pharmacological ef-

fect similar to that of controlled substances and he intended that the substances be used as substitutes for controlled substances. Pet. App. 5a-6a.[8] Petitioner's bath salts were "white powder," "off-white powder," and "beige crystalline powder," which petitioner sold in plastic "baggies," "plastic vials," and "blue jeweler's bag[s]." J.A. 43-46, 49-54, 57-58. The prices petitioner set for his products (and the prices users paid) further suggest his knowledge that he was distributing regulated substances: he sold them to McDaniel for $15 per gram (approximately $425 per ounce), and she sold them to her customers for $30 to $70 per gram (approximately $850 to $1980 per ounce). J.A. 47. The names petitioner gave to his products further indicate that he knew both that they produced drug effects and that they were either controlled substances or closely related to controlled substances: Speed, No Speed, The New Up, Alpha, Sheen's Winning, and Hardball. J.A. 46, 50-53, 62-63, 75, 82.

On recorded telephone calls with McDaniel, petitioner stated that one of his products was "the replacement for the MDPV," which petitioner had previously sold but had been recently listed as a controlled substance. J.A. 62. He discussed which of his products was the "most powerful" and gave the most "intense" "feeling." *Ibid.* Petitioner confirmed for McDaniel that one substance (a mixture of Alpha and 4-MEC) was "like cocaine"; that "No Speed Limit" was like crystal meth; and that the "new Sheens" was

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[8] During the course of the government's investigation, the DEA classified MDPV and MDMC as controlled substances. See Pet. App. 6a n.2. The government did not charge petitioner with distributing either product after this classification. *Ibid.*

"more like the meth" or "synthetic meth" than like synthetic cocaine. J.A. 62-64, 68-70; see J.A. 69 (petitioner describing the "new Sheens" as giving "a harder hit to a shorter period of time"). A former methamphetamine addict who had purchased bath salts from McDaniel testified that they produced an effect on his body "ten times more potent than meth." J.A. 55.

The record evidence also showed that petitioner attempted to conceal his activities, further suggesting that he was conscious of his own wrongdoing. For example, when asked which of his products was an alternative for methamphetamine, petitioner responded, "we don't talk about that, you know that." J.A. 84.[9] Petitioner also attempted to disguise the true nature of his business, telling a buyer searching for bath salts on his website to "look at green valley oils" and describing it as "a front for the hardball." J.A. 95-96; see J.A. 95 (telling a customer to look for a product "under the Green Valley Oils with the Hardball Aromatherapy trying to put some shade on it."). And petitioner spoke in a sort of code when advising McDaniel about which of his bath salts should be snorted or smoked. J.A. 77-78 ("[S]ome people like to put it directly on a burner and then it smokes. You know, you smoke," but for other substances "some people like to use it just as an aromatherapy to, you know, to smell it. * * * You know what I mean? * * * [I]t depends on usage which chemical I would send you.").

Petitioner emphasizes (Br. 9-10; see Pet. 7) that he checked the DEA's website to see whether any of the

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[9] Petitioner went on, however, to state that "the closest thing you have to that as an alternative is Hardball." J.A. 84.

substances he sold were listed as controlled substances and that he did not sell any substance after it was listed. That evidence tends to show that petitioner believed that his actions did not violate the CSA specifically, but it does not rebut the vast evidence demonstrating that he knew his actions were illegal more generally. A defendant who knows his actions are illegal need not know which statute or regulation he is violating to have the requisite evil mind to support a conviction under a "knowingly" standard. See *Liparota* v. *United States*, 471 U.S. 419, 434 (1985) (government can prove that a defendant knowingly used food stamps in a manner not authorized by law with proof that he knew his actions were illegal even if he did not know which statute or regulation made his actions illegal); cf. *Bryan* v. *United States*, 524 U.S. 184, 192-193 (1998) (government may prove that a defendant willfully dealt in firearms without a federal license if the government proves the defendant's knowledge that his conduct was illegal even if defendant did not know what provision of law made his conduct illegal). Petitioner's close attention to the published schedules of controlled substances shows, moreover, that he knew the products he sold had drug effects sufficiently similar to those of controlled substances to support their eventual inclusion on the schedules. Cf. *United States* v. *Sullivan*, 714 F.3d 1104, 1107 (8th Cir. 2013) (evidence that petitioner "indicat[ed] the bath powder was illegal supports a reasonable inference he knew the powder contained a controlled substance analogue"). In addition, when one of the drugs petitioner sold (MDPV) was added to Schedule I, he did not respond by ceasing his operations and getting out of the business of selling "bath

salts" for use as recreational drugs. Instead, he began selling a "replacement for the MDPV." J.A. 62.

These facts together establish beyond a reasonable doubt that any rational jury would have found that petitioner knew he was dealing with illegal or regulated drugs. Petitioner concedes (Br. 33) that, even under the more onerous mental-state requirement he prefers, a jury may rely on circumstantial evidence—including evidence of a defendant's furtive conduct and evidence that a defendant was told that a substance is an analogue—and may draw inferences of a guilty mind from what the defendant said about the effects of the drugs he distributes. See *Turcotte*, 405 F.3d at 529 n.7 (noting that, where defendant intended or represented that a substance had similar physiological effects to a controlled substance, "as a matter of common sense, it would seem strange to allow [defendant] to claim he did not know" the substance was an analogue of the controlled substance); see also *Sullivan*, 714 F.3d at 1107 (that petitioner "indicat[ed] the bath powder was illegal supports a reasonable inference he knew the powder contained a controlled substance analogue"). This Court has repeatedly held that instructional error on an element of an offense is subject to harmless-error review and that "a conviction should be affirmed '[w]here a reviewing court can find that the record developed at trial established guilt beyond a reasonable doubt.'" *Pope* v. *Illinois*, 481 U.S. 497, 502-503 (1987) (quoting *Rose* v. *Clark*, 478 U.S. 570, 579 (1986)). As in *Neder*, this Court should apply harmless-error review to the record in this case, including the jury's apparent conclusion that petitioner knowingly distributed a substance with substantially similar pharmacological effects to that of

a controlled substance (or intended or represented that the substance have such effects), and affirm the judgment of the court of appeals.

In addition, petitioner errs in asserting that the district court "instruct[ed] the jury that the only mens rea required for a criminal conviction of the Analogue Act is an intent that the alleged analogue be consumed by humans." Pet. Br. 16; see *id.* at 35, 40. The district court also instructed the jury that it had to find that petitioner "knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act." J.A. 40 (quoted at Pet. Br. 14 n.9). That instruction parrots the mental-state language of Section 841(a) and applies it to the pharmacological-effect prong of the definition in Section 802(32)(A). See D. Ct. Doc. 217, at 3 (Jan. 10, 2013) (government's closing argument) ("[A] basic summary of the law involved in this trial is that it is illegal to slightly alter the chemical structure of a Schedule I controlled substance and distribute it for human consumption, intending that it gets people just as high, if not higher, than that Schedule I controlled substance."). In light of that instruction, the jury's guilty verdicts reflect a finding that petitioner was either aware that the substances he distributed had a pharmacological effect similar to that of controlled substances or represented that they had such an

effect.[10] Either way, a jury may often infer knowledge of illegality from such a finding—and in light of the additional evidence of petitioner's guilty mind, any rational jury would have convicted petitioner of the Analogue Act offenses on this record.

2. Based on the jury instruction actually used by the district court and on the overwhelming evidence that petitioner knew he was dealing with illegal or regulated drugs, the court of appeals correctly affirmed petitioner's convictions. In so doing, the court of appeals relied on a prior Fourth Circuit case stating that the only mental state the government needs to establish to obtain an Analogue Act conviction is a defendant's intent that the substance be used for human consumption. Pet. App. 21a-22a (relying on *Klecker*, 348 F.3d at 71-72). Relying on circuit precedent, the government requested (and the district court rejected) an instruction in which the mental-state element was limited to the intent for human consumption. J.A. 27-28. And the government relied on that precedent in defending petitioner's convictions on appeal. Gov't C.A. Br. 60-63. The Fourth Circuit's approach is not, however, a correct interpretation of the statutes that define an Analogue Act violation. As discussed in this brief, the Analogue Act incorporates the CSA's mental-state requirement, which (when adapted to the Analogue Act context) requires more

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[10] Based on petitioner's reliance on the statutory holding in *Flores-Figueroa*, *supra*, that the word "knowingly" applies to each ensuing element in the same sentence, he presumably agrees that that instruction required the jury to find that petitioner knew each element in that sentence, including that the substance he distributed had a pharmacological effect substantially similar to that of a controlled substance.

than proof that a defendant intended a substance for human consumption. In the Brief in Opposition filed in this case, the government defended the court of appeals' affirmance of petitioner's convictions and explained why the district court correctly rejected petitioner's proposed instruction on chemical structure, but did not defend the court of appeals' view of the limited mental-state requirement to prove a violation of the Analogue Act. Br. in Opp. 10-17.

Although the court of appeals relied on faulty reasoning, its ultimate judgment affirming petitioner's convictions and its holding that the district court did not abuse its discretion in declining to accept petitioner's proposed chemical-structure instruction were correct and should be affirmed by this Court. This Court "reviews judgments, not opinions." *Chevron U.S.A. Inc.* v. *NRDC*, 467 U.S. 837, 842 (1984). In the course of deciding the question presented, the Court should make clear that the Fourth Circuit has erred in interpreting the mental-state requirement for Analogue Act violations. But because that error did not affect the outcome of the appeal in this case, the Court should affirm the judgment of the court of appeals.

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted.

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APPENDIX

1. 21 U.S.C. 802(32) provides:

Definitions

(32)(A) Except as provided in subparagraph (C), the term "controlled substance analogue" means a substance—

(i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;

(ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or

(iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

(B) The designation of gamma butyrolactone or any other chemical as a listed chemical pursuant to paragraph (34) or (35) does not preclude a finding pursuant to subparagraph (A) of this paragraph that the chemical is a controlled substance analogue.

(C) Such term does not include—

(i) a controlled substance;

(ii) any substance for which there is an approved new drug application;

(iii) with respect to a particular person any substance, if an exemption is in effect for investigational use, for that person, under section 355 of this title to the extent conduct with respect to such substance is pursuant to such exemption; or

(iv) any substance to the extent not intended for human consumption before such an exemption takes effect with respect to that substance.

2. 21 U.S.C. 813 provides:

Treatment of controlled substance analogues

A controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I.

3. 21 U.S.C. 841(a) provides:

Prohibited acts A

(a) Unlawful acts

Except as authorized by this subchapter, it shall be unlawful for any person knowingly or intentionally—

(1) to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense, a controlled substance; or

(2) to create, distribute, or dispense, or possess with intent to distribute or dispense, a counterfeit substance.

No. 14-378

IN THE

Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN,

Petitioner,

v.

UNITED STATES OF AMERICA,

Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

REPLY BRIEF FOR THE PETITIONER

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REPLY BRIEF FOR THE PETITIONER

The Government ends its brief where it should have begun: confessing that it led the Fourth Circuit into error when it insisted below that "the only mental state the government needs to establish to obtain an Analogue Act conviction is a defendant's intent that the substance be used for human consumption." U.S. Br. 45. The Solicitor General further acknowledges that the district court's misapprehension of the law led it to give an erroneous jury instruction. *Id.* 39; Pet. App. 57a-58a. The Government nonetheless urges the Court to affirm on the basis of a novel "regulated status" theory it never raised below and which would lead to affirmance only if this Court engaged in an intensely fact-bound harmless error analysis. The Court should reject that invitation. The Government's argument is meritless, would not affect the outcome even if accepted, and is waived in any event. Accordingly, the Court should reverse and remand for a new trial.

I. The Government's "Regulated Status" Argument Is Meritless.

The Solicitor General now admits that in an Analogue Act prosecution, the Government must "prove, *inter alia*, that the defendant knowingly distributed a controlled substance analogue." U.S. Br. 13. He further acknowledges that the jury instruction petitioner proposed was correct, at least as far as it went, in providing that the Government proves that a defendant knowingly distributed an analogue when it establishes "the defendant's knowledge of the characteristics in the statutory definition of a controlled substance analogue." *Id.* 28;

see J.A. 29-30. But he does not claim that the Government offered sufficient evidence to make that showing in this case, no doubt because there was no evidence petitioner was aware of the chemical structure of his products.

Instead, the United States insists that this "knowledge of identity" approach is simply one of "two ways to prove that a defendant knowingly distributed a controlled substance" under the Controlled Substances Act (CSA). U.S. Br. 26. The other way, the Government says, is the "knowledge of regulated status" approach. Under that approach, the prosecution needed only to prove that petitioner knew that "the substances he was distributing were *illegal or regulated drugs.*" *Id.* 39 (emphasis added).

The United States acknowledges that the jury instructions did not require the Government to prove knowledge under either approach. U.S. Br. 39. But it argues that the instructional error was harmless because, in its view, the evidence proved "beyond a reasonable doubt that any rational jury would have found that petitioner knew he was dealing with illegal or regulated drugs," even if it did not show that petitioner knew his products had the features required to render them analogues under the statute. *Id.* 43; *see id.* 39-43.

That argument is wrong in the first instance because the "regulated status" theory as conceived by the Government has no basis in the law. Accepting it would work a radical transformation of the Government's burden not only in analogue cases, but also in prosecutions involving ordinary scheduled controlled substances.

A. The Government Is Not Asking For A Rule Limited To Defendants Who Know They Are Violating The CSA Itself, Or One That Allows Juries To Draw A Permissive Inference Based On The Defendants' Generalized Knowledge Of Unlawfulness.

Before explaining the error in the argument Government does make, it may be helpful to clarify what the United States is *not* arguing.

1. The Government is not arguing for a rule under which mens rea may be established by showing that the defendant knew his products were illegal under the CSA *itself*. That is, the Government's "regulated status" theory is not limited to cases in which the defendant knew that an item was illegal under the statute *of conviction*. If that were all the Government was claiming, petitioner might agree. For example, if someone handed a defendant a sealed box and told him it contained "a substance banned by the Controlled Substance Analogue Act," that might suffice as a matter of law to establish the defendant's mens rea, even if he knew nothing else about what was in the box.

But that is not because such proof is an *alternative* to the "knowledge of identity" approach. It is simply a special *application* of the approach, wholly consistent with the ordinary mens rea requirement that the defendant know the facts that make his conduct unlawful: if the defendant believed what he was told, he would know that the substances in the box necessarily had the characteristics that qualified them as analogues under the Act, which is

the only fact he needs to know in order to be aware that possessing the box is illegal under the CSA.

This kind of "regulated status" theory, however, is of no use to the Government in this case. The Solicitor General admits that the evidence "tends to show that petitioner believed that his actions did *not* violate the CSA specifically." U.S. Br. 42 (emphasis added). Indeed, it was undisputed at trial that petitioner had specifically researched whether the substances were illegal under the CSA and did not know the Analogue Act even existed. *See* Petr. Br. 9-10; D. Ct. Docket No. 217, at 73 (Government's closing argument) (disavowing any claim that petitioner saw information about the Analogue Act when reviewing the DEA website).

2. So the Government is forced to pursue a broader theory under which a defendant knowingly distributes a controlled substance if he believes his products are illegal or regulated under *any* law. U.S. Br. 29-30. In making that argument, the Government is not asserting the modest claim that generalized knowledge of unlawfulness is *evidence* from which a jury may draw a *permissive* inference that the defendant either knew that he was violating the CSA specifically or knew the facts that made his conduct unlawful under the CSA (*i.e.*, that his products contained cocaine).

Again, if that was all the Government was arguing, petitioner might agree. *See* Petr. Br. 33; *see also, e.g.*, *United States v. Hassan*, 578 F.3d 108, 124-26 (2d Cir. 2008); *United States v. Hussein*, 351 F.3d 9, 20-21 (1st Cir. 2003). Allowing such inferences is not unique to CSA or Analogue Act prosecutions. A jury could just as easily infer that a defendant selling

machine guns in a dark alley for large sums of cash knew that he was selling machine guns, not ordinary rifles. But importantly, any such inference is purely permissive. A defendant might explain, for example, that she genuinely believed the guns to be single-shot replicas of machine guns, but was selling them furtively because she thought the sale was nonetheless unlawful (*e.g.*, because the guns were stolen, because even single-shot replicas of machine guns were prohibited under state law, or because the guns were illegally imported in violation of a federal import ban against Russia). Or a defendant might explain that he thought he was selling a dietary supplement in violation of FDA rules, but was unaware that the product contained methamphetamines. If a jury believed these defendants' explanations, it would be obliged to acquit (absent other evidence) because the defendants' belief that they were violating some *other* law does nothing to show that they knew they were distributing a "controlled substance" as that term is defined in the CSA.

Which is why the Government is not asking the Court to establish a permissive inference. Having admitted that the jury instructions were incorrect, it can prevail only by showing "beyond a reasonable doubt that the omitted element was uncontested and supported by overwhelming evidence." *Neder v. United States*, 527 U.S. 1, 17 (1999). Simply showing that the evidence would have *permitted* the jury to infer that petitioner had the required mental state does not satisfy that standard. *See, e.g.*, *United States v. Turcotte*, 405 F.3d 515, 528-29 (7th Cir. 2005).

Instead, the Government seeks a rule under which it would be entitled to an instruction *requiring* the jury to find mens rea established if the prosecution proved the defendant knew his products were illegal or regulated under *some* law, even if he honestly believed they were legal under the CSA. It effectively asks the Court to convert what ordinarily would be a permissive inference into a mandatory one. Or, more accurately, it is proposing an alternative *definition* of what it *means* to knowingly distribute a controlled substance.

B. General Knowledge Of Unlawfulness Is No Substitute For Knowledge Of The Facts That Make A Defendant's Conduct Illegal.

The Government's "regulated status" definition of knowing distribution runs headlong into this Court's repeated teaching that when a statute punishes only knowing possession or distribution of a particular kind of item, the defendant must know "of the features of" the item "that brought it within the scope of the Act." *Staples v. United States*, 511 U.S. 600, 619 (1994); *see* Petr. Br. 36-38 (same rule applied in cases involving unregistered firearms, drug paraphernalia, false identification, and pornography involving minors). The Government would now seemingly insist that it can avoid having to make that showing by demonstrating, instead, that the defendant believed he was acting unlawfully under state law or some other federal regulation, even if he was completely ignorant about the facts that made his conduct illegal under the federal statute of conviction, and even if he honestly believed

that he was complying with the federal statute he was accused of violating.

Such a rule makes no sense. Even if petitioner believed his products were illegal or regulated under a state drug law, FDA regulation, or import statute, that would hardly suffice to show that he knew that the products were "controlled substances" as required by Section 841(a). For example, a defendant handed a box and told that it contained Cuban cigars imported in violation of a federal trade embargo would know he was dealing with a "regulated or illegal" substance. But that would not prove he knew he possessed a "controlled substance" as that phrase is used in the CSA, even if it turned out that, unbeknownst to him, the cigars contained marijuana. His belief that the substance was illegal would reflect only his factual belief that his cigars came from Cuba and his legal knowledge of the import ban. Neither has anything to do with the CSA.[1]

The same would be true of a defendant selling diet pills containing a substance she believed to be illegal under the Food and Drug Act as an unsafe food additive. *See* 21 U.S.C. § 342(a)(2)(C).[2] If she was unaware that the substance was substantially similar to a controlled substance, her knowledge that

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[1] Of course, an item regulated by an import law could be considered a "controlled substance" in a very literal sense (since it is "controlled" by virtue of the law). But if that is what the Government means, it is just playing word games.

[2] *See generally* Food and Drug Administration, DMAA in Dietary Supplements, http://www.fda.gov/Food/DietarySupplements/QADietarySupplements/ucm346576.htm.

the pills were regulated or illegal under a federal drug law other than the CSA would not show that she knowingly sold a "controlled substance" within the meaning of the CSA.

None of the circuit cases the Government cites hold to the contrary. Most refer to knowledge of illegal or regulated status only as a short-hand for the principle that a defendant "knowingly possessed a controlled substance" if he "knew he possessed a controlled substance (even though he was either mistaken about or did not know its exact identity)." *Hussein*, 351 F.3d at 19; *see also United States v. Ali*, 735 F.3d 176, 186-87 (4th Cir. 2013); *Hassan*, 578 F.3d at 125; *United States v. Ramirez-Ramirez*, 875 F.2d 772, 774 (9th Cir. 1989); *United States v. Gonzalez*, 700 F.2d 196, 200 (5th Cir. 1983); *United States v. Lewis*, 676 F.2d 508, 512 (11th Cir. 1982); *United States v. Morales*, 577 F.2d 769, 776 (2d Cir. 1978).[3] While some use broad language referring to "an illegal drug" or a "regulated" substance, there is no suggestion the courts had in mind laws other than the statute of conviction. *See, e.g.*, *Hussein*, 351 F.3d at 21; *Lewis*, 676 F.2d at 512. To the extent any court has considered the possibility that a defendant might believe his substances were illegal under some other law, they have acknowledged that such a belief would not prove the knowledge required by the CSA.

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[3] This principle has no application to this case because the Government does not claim that petitioner knew he was distributing substances that were substantially similar to a controlled substance, but was simply mistaken or ignorant about which analogue he was selling.

See, e.g., *Hassan*, 578 F.3d at 126 (defendant's alleged knowledge that importing khat "violated U.S. customs laws" insufficient to prove knowledge required by the CSA (internal quotation mark omitted) (citation omitted)); *Hussein*, 351 F.3d at 21 (same).

The Government's citations to this Court's decisions, *see* U.S. Br. 42, are likewise unavailing. The statute in *Liparota v. United States*, 471 U.S. 419 (1985), for example, criminally punished anyone who "knowingly uses, transfers, acquires, alters, or possesses coupons or authorization cards in any manner not authorized by [the statute] or the regulations." *Id.* at 420 (alteration in original) (quoting 7 U.S.C. § 2024(b)(1)) (internal quotation mark omitted). It was a *given* that this language required the Government to prove that the defendant was aware of the *facts* that made his conduct illegal under the statute – specifically, that he "knew that he was acquiring or possessing food stamps." *Liparota*, 471 U.S. at 422. The question was whether there were special reasons to require the Government *additionally* to prove that the defendant knew his conduct to be illegal in some general or specific sense. *See id.* at 423. No one suggested that the Government could escape proving the defendant's knowledge of the facts by proving only that he was aware that his conduct was unlawful under some unspecified statute or regulation. *Bryan v. United States*, 524 U.S. 184 (1998), likewise was a case in which a special feature of the statute – specifically, the requirement that the defendant act "willfully" instead of simply "knowingly" – required the Government to prove *both* the defendant's knowledge of the facts that made his conduct illegal under the

statute *and* his knowledge that his conduct was illegal. *See id.* at 191-92.

The Government has cited no decision by this Court interpreting *any* criminal statute to give the Government the option of proving the defendant's general knowledge of unlawfulness as a substitute for showing that he was aware of the facts that made his conduct illegal under the statute of conviction. To the contrary, with the exception of unusual cases like *Liparota*, the Court has generally construed "knowingly" requirements in criminal statutes to make the defendant's knowledge of the law irrelevant. *See, e.g.*, *Posters 'N' Things, Ltd. v. United States*, 511 U.S. 513, 524-25 (1994); *Morissette v. United States*, 342 U.S. 246, 271 (1952).

C. Nothing In The Text Or Purposes Of The CSA Or The Analogue Act Supports The Government's Position.

Nothing in the text or purposes of the Analogue Act warrants a novel exception to traditional mens rea principles.

1. The Government stresses that "the 'knowingly' requirement in 21 U.S.C. 841(a) applies *only* to the aspects of the CSA violation included in Section 841(a) and not to other aspects of the CSA violation contained in Section 841(b), such as the identity or quantity of the controlled substance." U.S. Br. 23. But petitioner has never argued that the knowledge requirement extends to the words in subsection (b). Instead, the Government must prove that the defendant knows his substance is substantially similar to a controlled substance because that is what it *means* to knowingly possess "a controlled substance" in an analogue case as those words are

used in Section 841(a). Petitioner would make the same argument if subsection (b) had never been enacted.

The Government says that if "petitioner agrees that the 'knowingly' requirement of Section 841(a) does not apply to Section 841(b), no reason would support extending it to Section 802(32)(A)." U.S. Br. 24. Nonsense. When Section 841(a) prohibits selling a "controlled substance," it incorporates the statutory definition of that term, which, under Section 813, includes analogues as defined in Section 802(32)(A). The fact that the definition is in a different subsection of the statute is irrelevant. For example, in *Staples*, after construing the law to require that the defendant know that his rifle was a "firearm" within the meaning of the statute, this Court naturally turned to the statutory definitions (in a separate section of the law) to identify the facts the defendant must know to have the required mens rea. 511 U.S. at 602, 619; 26 U.S.C. § 5861(d) (criminalizing unregistered possession of a "firearm"); *id.* § 5845(a)(6) (defining "firearm" to include a "machinegun"); *id* § 5845(b) (defining "machinegun"). Likewise, in *Flores-Figueroa v. United States*, the Court read the Aggravated Identity Theft statute to require the Government to prove the defendant knows, "at the very least, that the 'something' [he possesses] is a 'means of identification.'" 556 U.S. 646, 650 (2009). In so doing, the Court plainly contemplated that the Government would have to prove that the defendant knew he possessed an object with characteristics that made it a "means of identification" as defined by the statute, even though the definition was in another provision. *See* 18 U.S.C. § 1028A(a)(1) (punishing one who, among

other things, "knowingly . . . uses, without lawful authority, a means of identification of another person"); *id.* § 1028(d)(7) (defining "means of identification").

2. Nor is the Government's position compelled by the Analogue Act's purposes. As petitioner's opening brief predicted (Petr. Br. 29-31), the Government is unable to claim that a traditional reading of the statute impedes the prosecution of the underground chemists who were the principal targets of the statute. The Government points out that the statute was not limited to chemists, but engages a straw man when it claims that petitioner proposes a "'chemists only' limitation." U.S. Br. 32. In fact, petitioner has acknowledged that the statute applies to distributors as well, so long as they possess the mens rea required by the plain text of the statute. Petr. Br. 32-35. The Government simply ignores petitioner's detailed discussion of the ways in which the Government can, and frequently does, convict "street-level dealers" even in circuits that enforce the statute as written. *Id.*

Ultimately, the Government's position is that petitioner's interpretation of the law cannot be correct because it prevents prosecution of people like petitioner, *i.e.*, people unaware of the Analogue Act and the facts that make their conduct illegal. But that reasoning assumes its own conclusion. The best way to know whether Congress intended the Act to extend to such individuals is to apply the plain text of the statute in light of the traditions against which it was enacted.

D. The Government's "Regulated Status" Theory Fails To Cure The Statute's Vagueness.

The Court should also reject the Government's "regulated status" theory because it fails to mitigate the statute's vagueness.

1. *Absent A Robust Mens Rea Requirement, The Analogue Act Is Unconstitutionally Vague.*

The Government denies almost none of the premises of petitioner's vagueness argument. It does not dispute that: (a) the statute turns on facts that are inaccessible to ordinary people; (b) the statutory phrase "substantially similar" is inherently vague as to both the *degree* of similarity required and, more importantly, the *features* of chemical structure to be compared; as a consequence, (c) scientists cannot agree on either a methodology for judging similarity or the results with respect to particular substances; (d) the only way the Government can decide whether a substance is an analogue is to ask DEA scientists, who sometimes disagree; (e) when DEA scientists do reach a decision, they keep their conclusions a secret; and (f) even if one researches the case law, no sure answer can be provided because the Government is not bound in any future case by a jury's determination that a particular substance is not an analogue. Petr. Br. 45-51; *see also* NACDL Br. 3-8; Expert Forensic Scientists Br. 11-29.

At bottom, the Government does not seriously dispute that ordinarily there is no reasonable way for a non-chemist like petitioner to know whether selling

a potential analogue is illegal under the Act, short of getting arrested and tried before a jury.

The Government nonetheless argues none of this is constitutionally problematic or even remarkable. It says that Congress has used "similar" in other criminal statutes (three, to be precise). U.S. Br. 35-36. But asking a protester to decide whether a Molotov cocktail is similar to a "fire bomb," 18 U.S.C. § 232(5), is nothing like asking a construction worker to judge the degree of structural similarity between methcathinone and 3, 4-methylenedioxymethcathinone. *See* Petr. Br. 11-13.[4] The Government notes that the American Chemical Society informed Congress that "the term 'substantially similar' chemical structure is meaningful *to scientists*." U.S. Br. 36 (emphasis added) (quoting S. Rep. No. 99-196, at 5 (1985)) (internal quotation mark omitted). But the constitutional question here is whether it is meaningful to an ordinary person. Moreover, as demonstrated by briefs in this case, the Society's prediction has been proven wrong by more than 25 years of experience. *See* Expert Forensic Scientists Br.

The Government notes that experts disagree all the time and that juries resolve complex scientific questions. U.S. Br. 36. But the complaint here is not simply that a jury must resolve a complex scientific question; it is that an ordinary citizen must make

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[4] In addition, each of the statutes cited contains a conventional mens rea element. *See* 18 U.S.C. §§ 231(a), 1507, 2241(b)(2).

those same judgements without any of the expert testimony or lab reports available to jurors, subject to imprisonment if he reaches a conclusion in conflict with the view of the particular jury that hears his criminal case.

2. Only Petitioner's Interpretation Of The Statute Can Mitigate The Constitutional Problem.

Petitioner's interpretation of the Analogue Act's mens rea requirement would avoid a serious question of the Act's constitutionality as applied to petitioner and others like him. The Government's proposed "regulated status" test would not.

The Government objects that accepting petitioner's interpretation would "do nothing to mitigate the vagueness problem of which petitioner complains," U.S. Br. 35, because on petitioner's view, the statute is "vague to the core," *id.* 34. Not so. Adopting petitioner's position would prevent unconstitutional convictions of people for whom the statute is hopelessly vague because the Government will be unable to satisfy the mens rea element of the crime. That is hardly a "meaningless limit on the statute's reach." *Id.* 35. At the same time, petitioner has not taken the position that the statute is incapable of ever being constitutionally applied. It may well be, for example, that a clandestine chemist who intentionally sets out to make small modifications to an existing controlled substance will know that the alterations are insubstantial under any conceivable standard.

The United States' proposed "regulated status" test, on the other hand, does not solve the vagueness problem. It allows the Government to convict

individuals like petitioner, even if they have no reasonable basis for determining whether what they are selling is an illegal analogue, so long as the prosecution can convince a jury that the defendant knew the substance was "regulated or illegal" under *some* law. But the fact that a defendant may understand that his conduct violates one law does not obviate the constitutional need for fair notice that it also violated the *statute of conviction*. After all, defendants are entitled to clear notice of the criminal consequences of his acts. *See, e.g.*, *United States v. Batchelder*, 442 U.S. 114, 123 (1979). Knowing that he is violating a state drug law hardly puts a defendant on notice that he may instead be subject to the frequently harsher penalties of the CSA.

* * * * *

If the Court rejects the Government's "regulated status" theory, the only appropriate disposition is reversal and remand for a new trial. The Government's sole objection to the instruction petitioner proffered is the instruction's failure to include a version of the "regulated status" theory. *See* U.S. Br. 39. And although the Government claims any instructional error is harmless, that argument is likewise dependent on the meritless "regulated status" theory. *See id.* 39-43.

II. Even If Accepted, The "Regulated Status" Theory Does Not Render The Jury Instructions Proper Or The Instructional Error Harmless.

Even if the Court concludes that the "regulated status" argument has merit, that would be no basis for reversal.

The United States does not dispute that the jury instructions actually given were erroneous even under its interpretation of the statute. *See* U.S. Br. 39.[5] The Government also does not contest that this acknowledged error in the instructions is an independent and sufficient ground for reversal, even if the district court rightly rejected petitioner's proposed instruction. *See* Petr. Br. 36 n.22; U.S. Br. 39. It claims instead that any instructional error was harmless beyond a reasonable doubt "because no rational jury could have concluded that petitioner did *not* know that the substances he was distributing were illegal or regulated drugs (even if he did not know which law made his distribution of them illegal)." U.S. Br. 39.

That argument fails on its own terms because a rational jury would *not* have been compelled to find that petitioner knew his products were illicit drugs. To the contrary, the evidence was overwhelming that petitioner was entirely ignorant of the Analogue Act and believed that selling substances producing drug-like effects was legal so long as they were not on the CSA schedules.

The evidence shows that petitioner made substantial efforts to ensure that his sales complied with federal drug laws. With the assistance of his

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[5] That is because the instructions did not require the Government to prove *either* that petitioner knew his products were chemically similar to a controlled substance *or* that he was aware they were "regulated or illegal" under the Government's new theory. *See* J.A. 40.

law enforcement brother, petitioner compared the ingredients in his products with the DEA's list of controlled substances. Petr. Br. 9-10. When he became aware that a substance in some of his products had been placed on the schedules, he promptly flushed the products down the toilet. *Id.* 10. When an undercover DEA agent attempted to purchase the newly scheduled chemicals from him, petitioner refused. *Id.* None of this is consistent with someone who believed all along that he was selling illegal substances and just did not care.

The Government thus admits that the evidence "tends to show that petitioner believed that his actions did not violate the CSA specifically," but argues that this "does not rebut the vast evidence demonstrating that he knew his actions were illegal more generally." U.S. Br. 42. Why, however, would petitioner bother consulting the CSA schedules if he was determined to sell his products whether they were legal or not? Why stop selling products containing one banned substance if he knew that his other products also contained illegal drugs and had decided to sell them anyway?

The Government says that searching the schedules shows that petitioner was aware that "the products he sold had drug effects sufficiently similar to those of controlled substances to support their eventual inclusion on the schedules." U.S. Br. 42. And it points to evidence that petitioner represented that his substances had effects similar to actual controlled substances. *Id.* 40-41. But this evidence is entirely consistent with petitioner's claim that he was ignorant of the Analogue Act and believed that such substances were legal so long as not listed on

the CSA schedules. That is, it shows that petitioner understood that his products *might* be illegal, such that research into their legality was prudent. Having discovered that his products were not on the CSA schedules, and believing them therefore to be legal despite their effects, he felt free to sell them and describe those effects to potential customers.[6]

Moreover, the Government's assumption that anyone would know that a substance having "drug effects" is illegal is counterfactual. The CSA prohibits drugs with psychoactive effects only if they meet additional criteria. *See* 21 U.S.C. §§ 811(a), 812(b). And the Analogue Act criminalizes distribution of substances that have substantially similar effects to previously scheduled controlled substances *only if* they are substantially similar in chemical structure. *Id.* § 802(32)(A). Thus, it is not so surprising that at the time petitioner was selling his products, bath salts were being sold openly in his neighborhood delis and gas stations, even advertised in local newspapers and magazines. *See* C.A. J.A. 635-36.

So the Government is left with its evidence allegedly showing that petitioner "attempted to conceal his activities," facts it says "*suggest* that he was conscious of his own wrongdoing." U.S. Br. 41 (emphasis added). That suggestion is undermined by

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[6] So, too, the Government's litany of other circumstantial evidence – the form of the substances and their packaging, names, and pricing – is perfectly consistent with petitioner (wrongly) believing that he was exploiting a legal opening in the drug laws.

the Government's insistence, in the immediately prior paragraph, that petitioner was *not* in fact, particularly careful to hide the nature of what he was selling, openly comparing them to illicit drugs. *See id.* 40-41. In any event, a reasonable jury would not be compelled to find knowledge of unlawfulness from this evidence. Petitioner might have worried that if he was more open about his sales, the police might arrest him even if his business was lawful – *e.g.*, because they wrongly assumed that his products contained controlled substances, because they misapprehended the law, or because they just wanted to harass him. Or he might worry that even though he honestly believed his products were legal, he could be wrong. In any event, the alleged evidence of concealment is hardly sufficient to compel a jury to disregard the far more direct evidence that petitioner believed his business was lawful.

III. The "Regulated Status" Theory Is Waived.

Finally, in addition to being meritless and making no difference to the outcome of this case, the "regulated status" theory is waived, having been invented by the Solicitor General for the first time in the Government's brief on the merits.

In the Fourth Circuit, the Government's only objections to petitioner's proposed instructions were: (a) under circuit precedent the only relevant intent the Government need prove is intent for human consumption, U.S. C.A. Br. 60-63, and (b) petitioner's instruction incorrectly stated that he had to know (as opposed to intend) that the substance would be

consumed by human, *id.* 64-65.[7] The Government also raised a one-paragraph harmless error argument that likewise had nothing to do with any "regulated status" theory. The brief noted that petitioner's proposed jury instruction permitted conviction if the jury found that he "had a strong suspicion that the substances he was distributing *possessed the characteristics of controlled substance analogues*, as defined above, and that he deliberately avoided the truth." *Id.* 63 (emphasis added) (quoting petitioner's proposed instruction, reproduced at J.A. 29-30) (internal quotation mark omitted). The Government then claimed that given the evidence in the case "a rational jury would have found McFadden guilty *under his own proposed instruction*." U.S. C.A. Br. 64 (emphasis added). That is, the Government argued that a jury would have been compelled to convict petitioner under what it now calls the "knowledge of identity" approach embodied in petitioner's proposed charge.

The brief in opposition likewise said not a word about the present "regulated status" theory, and certainly did not assert with any clarity that any instructional error was harmless because the evidence showed that petitioner knew his conduct was unlawful even if he did not know anything about the chemical structure of his products. *See, e.g.*, BIO 26 (arguing that if petitioner "had been unaware or unsuspecting that the products he sold had the *characteristics of controlled substance analogues*, he

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[7] The relevant section of the Government's brief is reproduced at Appendix A.

would never have checked the DEA's website to see whether they were already controlled" (emphasis added)).

As the cert. reply brief explained, the harmless error arguments the Government actually made below are meritless. Pet. Reply 10-12. "In granting certiorari, [this Court] necessarily considered and rejected [them] as a basis for denying review." *United States v. Williams*, 504 U.S. 36, 40 (1992). And, in any event, the Government has waived those arguments by failing to reassert them in its brief on the merits. At the same time, the Government's failure to raise its present theory in the lower court or in its brief in opposition forfeits the new argument in this Court. *See Ryder v. United States*, 515 U.S. 177, 186 (1995); Sup. Ct. R. 15.2.

CONCLUSION

For the foregoing reasons, the judgment of the court of appeals should be reversed.

Respectfully submitted,

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APPENDIX

APPENDIX A

EXCERPT FROM UNITED STATES' CORRECTED BRIEF OF THE APPELLEE IN THE FOURTH CIRCUIT

Docket No. 34, No. 13-4349 (4th Cir.)

* * *

[*54]VII. THE COURT PROPERLY INSTRUCTED THE JURY.

McFadden argues that the district court improperly instructed the jury in that the instructions failed to require the jury to find that McFadden knew that the [*55] substance he was selling had the essential characteristics of a controlled substance analogue, as outlined in § 802(32)(A)(i)-(iii). Br. of Appellant at 56-59. When jury instructions are challenged on appeal, the central inquiry is "whether, taken as a whole, the instruction fairly states the controlling law." *Cobb*, 905 F.2d at 788-89. Further, this Court reviews jury instructions in their entirety and as part of the whole trial. *Park*, 421 U.S. at 674. On that basis, this Court determines "whether the [district court] adequately instructed the jury on the elements of the offense and the accused's defenses." *Fowler*, 932 F.2d at 317. To determine whether denial of a requested jury instruction constitutes reversible error, this Court has articulated a three-part test. "A district court's refusal to provide an instruction requested by a defendant constitutes reversible error only if the

instruction: (1) was correct; (2) was not substantially covered by the court's charge to the jury; and (3) dealt with some point in the trial so important, that failure to give the requested instruction seriously impaired the defendant's ability to conduct his defense." *United States v. Lewis*, 53 F.3d 29, 34-35 (4th Cir. 1995)(internal quotations and citations omitted). *Accord United States v. Patterson*, 150 F.3d 382, 388 (4th Cir. 1988), *cert. denied*, 525 U.S. 1086 (1999). *But cf. United States v. Hurwitz*, 459 F.3d 463, 476-82 (4th Cir. 2006)(although defendant's requested instruction was incorrect statement of law, and was therefore properly denied, [*56] district court's erroneous instruction on the same point, which went to the heart of the defense, held reversible error).

The district court's instructions in this case were in accordance with 21 U.S.C. §§ 802(32), 813 and 841, and were consistent with Fourth Circuit precedent. For the reasons herein, the court did not abuse its discretion in denying McFadden's proposed instruction, and McFadden's appeal in this regard should be denied.

Under 21 U.S.C. § 841(a)(1), it is a criminal offense to knowingly or intentionally distribute or dispense a controlled substance or to possess with an intent to distribute or dispense a controlled substance. The essential elements of such a distribution offense are (1) possession of the controlled substance; (2) knowledge of the possession; and (3) intent to distribute. *See United States v. Hall*, 551 F.3d 257, 267 (4th Cir. 2009); *United States v. Crockett*, 813 F.2d 1310, 1316 (4th Cir.1987). Under 21 U.S.C. § 813, as enacted in the CSAA, a

"controlled substance analogue" is treated as a controlled substance to the extent it is intended for human consumption. The statutory definition of a controlled substance analogue is:

> A substance—[*57]
>
> i. the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;
>
> ii. which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or
>
> iii. with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. § 802(32)(A).

At his trial, McFadden requested an instruction requiring the jury to find that the defendant knew the specific characteristics of a controlled substance analogue. The proposed instruction was as follows:

> . . .You may find that the defendant knowingly participated in a conspiracy to distribute controlled substance analogues,

and that he knowingly distributed controlled substance analogues, if you find beyond a reasonable doubt that he knew that the substances that he was distributing possessed the characteristics of controlled substance analogues-that is, that he knew that:

1. The chemical structure of the substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act;

2. The substance has an actual, intended or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is [*58] substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substance Act; and

3. The substance would be consumed by humans.

You may find that the defendant knowingly distributed controlled substance analogues if you find beyond a reasonable doubt that he had a strong suspicion that the substances that he was distributing possessed the characteristics of controlled substance analogues, as defined above, and that he deliberately avoided the truth.

> You may not find that the defendant acted knowingly if he was merely mistaken or careless in not discovering the truth, or if he failed to make an effort to discover the truth.

JA 191.01-.04, 191.11. In response to McFadden's motion, the district court entered an Order denying McFadden's request and advising the parties in its Order that "the court intends to utilize the elements set forth by the United States Court of Appeals for the Fourth Circuit in *United States v. Klecker*, 348 F.3d 69 (4th Cir. 2003), in its instructions to the jury." JA 105. Later, in response to McFadden's Motion for Judgment of Acquittal, the court reached the same conclusion. JA 919-23.

For the conspiracy offense charged in Count One of the indictment, the court instructed the jury that, in order to find McFadden guilty of Count One, the jury had to be convinced that the government has proven each of the following elements beyond a reasonable doubt: [*59]

> First, that beginning in or around June of [2011,] and continuing until February 15, 2012, [two] or more persons, directly or indirectly, reached an agreement or understanding to accomplish a common plan;
>
> Second[,] that the defendant knew the purpose of the agreement, and joined in it willingly, that is, with the intent to further the purpose of the plan;
>
> Third, that the purpose of the plan was to distribute or possess with intent to distribute, for human consumption, a mixture or

> substance containing MDPV, MDMC/ Methylone, or 4-MEC, which has an actual, intended, or claimed stimulant, depress[ant], or hallucinogenic effect on the central nervous system that is substantially similar to that or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; Four, that the chemical structure of MDPV, MDMC/Methylene, or 4-MEC is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act.

JA 919-20.

For the offense of distributing a controlled substance analogue, as charged in Counts Two through Nine of the indictment, the court instructed the jury that the government had to prove, as to each count, the following essential elements beyond a reasonable doubt:

> First, that the defendant knowingly and intentionally distributed a mixture or substance that has an actual, intended, or claimed stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II of the Controlled Substances Act; [*60]

> Second[,] that the chemical structure of the mixture or substance is substantially similar to the chemical structure of a controlled substance in Schedule I or II of the Controlled Substances Act[;] [a]nd,
>
> Third[,] that the defendant intended for the mixture or substance to be consumed by humans.

JA 920.

In *Klecker*, 348 F.3d at 71, this Court set forth the necessary elements to establish a violation of the Analogue Act in, stating that the government must prove: (1) the alleged analogue and a controlled substance have substantial chemical similarity, (2) actual, intended, or claimed physiological similarity between the alleged analogue and the controlled substance, and (3) intent that the alleged analogue be consumed by humans. McFadden's argument largely relies instead upon the Seventh Circuit decision in *Turcotte*, 405 F.3d at 522, in which that Court held that "[a] defendant must know that the substance at issue has a chemical structure substantially similar to that of a controlled substance, and he or she must either know that it has similar physiological effects or intend or represent that it has such effects." But the district court's instructions in this case were entirely consistent with the Fourth Circuit's *Klecker* decision, 348 F.3d at 71-72, and required the Government to prove that the defendant intended for the [*61] substances to be consumed by humans, as required by § 813, and that the defendant must have "knowingly and intentionally" distributed the substances, tracking the statutory language from

§ 841. The district court thus properly concluded that the additional instruction McFadden requested was not required by statute, or by Fourth Circuit precedent. JA 912; *see id.*

The statute at issue in this case contains a scienter requirement, in that § 813 requires proof of "intent for human consumption," before an analogue may be treated as a controlled substance. 21 U.S.C. § 813; *see Klecker,* 348 F.3d at 71; *but see Forbes*, 806 F. Supp. at 238; *Carlson,* 87 F.3d at 443, n.3 (citing *Forbes* and noting "the absence of a scienter requirement in the Analogue Act"); *United States v. Roberts*, 363 F.3d 118, 123 n.1 (2d Cir. 2004)(concluding that the scienter requirement of the CSA, 21 U.S.C. § 841 requires the Government to prove that the defendants knew that they possessed a controlled substance). The requirement that the Government prove intent for human consumption distinguishes analogue cases from distribution offenses under the CSA, which has no such requirement. The *Klecker* Court identified the essential elements of a violation of the Analogue Act and concluded that "[t]he intent requirement alone tends to defeat any vagueness challenge based on the potential for arbitrary enforcement." *Klecker,* 348 F.3d at 71(citing *Carlson,* 87 F.3d at 444). The *Klecker* decision lends [*62] additional support for the Government's position. In *Klecker,* the Court addressed the defendant's challenge that Foxy and DET were substantially similar. 348 F.3d at 71-72. The Court relied on chemical diagrams to find that the two substances were substantially similar for purposes of the analogue statute. *Id.* at 72. It held

that it did not have to address the question of whether the defendants had actual knowledge that the substance was an analogue because, for purposes of the vagueness challenge, "the Analogue Act would not be unconstitutionally vague as applied to Foxy even with respect to a defendant who lacked actual notice." *Id.* at 71-72; *see also United States v. DeSurra*, 865 F.2d 651, 653 (5th Cir. 1989)("If a defendant possesses an analogue, with intent to distribute or import, the defendant need not know that the drug he possess is an analogue. It suffices that he know what drug he possesses, and that he possess it with the statutorily defined bad purpose."). For the same reasons as those underlying the *Klecker* Court's decision regarding the question of notice, there should be no requirement that the Government prove that the defendant knew that the substance he possessed had the characteristics of a controlled substance analogue. The fact that the substance in fact has those characteristics, in conjunction with proof of intent for human consumption suffices to establish that the defendant possessed or distributed the substance with the statutorily defined bad purpose. *See id.* Where the district [*63] court additionally instructed the jury that the distribution must have been knowing and intentional, McFadden cannot establish that the court abused its discretion.

Additionally, even if this Court were to determine that the district court erred in declining to give McFadden's proposed instruction, any such error is harmless. *See Neder v. United States*, 527 U.S. 1 (1999). The test for determining harmlessness, whether the error was noninstruction or

misinstruction, is whether "[it is] clear beyond a reasonable doubt that a rational jury would have found the defendant guilty absent the error." *Neder*, 527 U.S. at 18 (internal citations omitted). In conducting harmless error analysis, "a reviewing court should consider not what effect the constitutional error might generally be expected to have upon a reasonable jury, but rather what effect it had upon the guilty verdict in the case at hand. . .." *United States v. Hastings*, 134 F.3d 235, 241 (4th Cir. 1998)(internal citation omitted). McFadden's proposed instruction includes an instruction on the notion of "willful blindness," and would have allowed the jury to convict McFadden if they found that he "had a strong suspicion that the substances he was distributing possessed the characteristics of controlled substance analogues, as defined above, and that he deliberately avoided the truth. You may not find that the defendant acted knowingly if he was merely mistaken or careless in not discovering the truth, or if he failed to make an effort to discover the truth." [*64] Br. of Appellant at 57; JA 191.03-04. In light of the evidence in this case, and in particular the recorded telephone calls, in which McFadden likens his substances to crystal meth and cocaine, in addition to his statements establishing that he was sometimes avoiding explicit references to controlled substances, ("we don't talk about that, you know that." JA 744), it is clear beyond a reasonable doubt that a rational jury would have found McFadden guilty under his own proposed instruction.

Finally, McFadden's proposed instruction was not a correct statement of the law in at least one

respect. His proposal would have required the jury to find beyond a reasonable doubt that the defendant "knew that: . . .3. The substance would be consumed by humans." JA 191.03-04; Br. of Appellant at 57. The statute clearly does not require knowledge that the substance be consumed by humans, and even *Turcotte* does not go that far. *See Turcotte*, 405 F.3d at 527 (concluding that the Government must prove that the defendant "know that the substance at issue has a chemical structure substantially similar to that of a controlled substance, and he or she must either know that it has similar physiological effects or intend or represent that it has such effects."). McFadden's proposed instruction was not correct, and would have resulted in the jury being misinstructed on the scienter element in § 813, which clearly requires that the [*65] defendant intend that the substance be consumed by humans, not that he knows that it would be consumed by humans. *See* 21 U.S.C. § 813. McFadden's proposed instruction was not "correct," and under the three-part test, McFadden has not shown that the district court erred in declining to give this instruction to the jury. *See Lewis*, 53 F.3d at 34-35. * * *

No. 14-378

IN THE

Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN,
Petitioner,

v.

UNITED STATES OF AMERICA,
Respondent.

On a Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF EXPERT FORENSIC SCIENTISTS AS AMICI CURIAE IN SUPPORT OF PETITIONER STEPHEN MCFADDEN

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INTEREST OF AMICI CURIAE[1]

Amici curiae are expert scientists within the fields of forensic chemistry, forensic toxicology, pharmaceutical design, and drug detection analysis who have conducted research at some of the world's leading medical schools, universities, and government laboratories. They include members of the American Academy of Forensic Sciences, American Chemical Society, Northeastern Association of Forensic Scientists, American Board of Criminalistics.

Amici have all provided expert testimony on numerous occasions and are experienced with issues associated with the Controlled Substance Analogue Enforcement Act ("CSAEA"). The question presented is specifically focused on the requisite intent for criminal prosecution under the CSAEA, however, prior to arriving at this question, an examination must be conducted in order to determine whether the substance in question is "substantially similar" to a controlled substance and thus, is found to be a controlled substance analogue. 21 U.S.C. §§ 802, 813.

Amici submit this brief on behalf of the defendant, with the intent to call the Court's attention to the statute's failure to define the term "substantially similar" and the problems that exist based on the absence of meaning within the scientific

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[1] No counsel for any party authored this brief in whole or in part, and no other person or entity other than amici or their counsel made a monetary contribution to its preparation and submission except for Edward J. Westbrook, who contributed monetarily to printing and production costs based on his affiliation with the Charleston School of Law. A consent letter on behalf of all the parties is on file with this Court.

community. Amici represented in this brief support the criminal prosecution of individuals who seek to manufacture or distribute illegal substances but have genuine concerns over the inconsistent, dissonant, and subjective application of methods used to determine whether an alleged substance is "substantially similar" as there is no reference material or method for this determination generally accepted within the field. As such, they have an important interest in not just the question presented to the court but the lack of meaningful minimum standards in order to do so. Amici include:

Joseph P. Bono, M.A., D-ABC is an independent forensic science consultant specializing in drug analysis with over 40 years of experience. He has worked at various levels of government, most notably, as a forensic scientist for the Drug Enforcement Administration and as the Laboratory Director for the United States Secret Service. He has served on numerous committees such as the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG), which recommends drug analysis and identification standards to laboratories worldwide; Chairman of the Virginia Forensic Sciences Board; and is the former President of the American Academy of Forensic Science. Mr. Bono is also a former adjunct professor in the Forensic and Investigative Sciences Program at Indiana University-Purdue University.

Anthony P. DeCaprio, Ph.D., DABT is an Associate Professor of Chemistry and Biochemistry and the Director of the Forensic and Analytical Toxicology Facility and Forensic Science Certificate Program for the International Forensic Research Institute at Florida International University. He is certified in General Toxicology by the American

Board of Toxicology and has extensive experience in chemistry and drug analysis, neurotoxicology/ neuropharmacology of drugs and chemicals, as well as biomarkers of drug and chemical exposure. He has published over 70 research papers in peer-reviewed journals and written several chapters for reference works in toxicology. Dr. DeCaprio has delivered more than 100 research papers and invited lectures; serves on the editorial board of two journals; and is a member of multiple professional organizations.

Francis Diamond is the Technical Leader in the Criminalistics Division of NMS labs and has 34 years of experience as a research scientist. His expertise includes techniques of separation and detection. He has developed analytical methods for the measurement of various drugs to include amphetamines, opiates, and benzodiazepines. Mr. Diamond has authored numerous papers in the field of analytical toxicology and participated in collaborative studies with instrument manufacturers and government agencies. He is also an Adjunct Professor at the Center for Forensic Science Research and Education at Arcadia University.

Paul L. Doering, M.S. is an Emeritus Distinguished Service Professor of Pharmacy practice at the University of Florida College of Pharmacy. He is also Co-director of the Drug Information and Pharmacy Resource Center. His research interests include drug information and interactions, and toxicology of drug products. Mr. Doering has been a consultant in legal matters for over 35 years. During this time, he has often consulted with the United States Drug Enforcement Administration (DEA) in both civil and criminal matters involving drug diversion by pharmacists and other health professionals.

Gregory B. Dudley, Ph.D. is an Associate Professor of Organic Chemistry and Associate Chair in the Department of Chemistry and Biochemistry at Florida State University. His expertise is in synthetic organic chemistry and his research focuses on organic reaction development and the chemical synthesis of natural products and drug-like compounds. Dr. Dudley's research efforts have resulted in over 80 written publications, over 100 invited seminar presentations, six patents, and two commercial products. He provides expert peer-review services for leading journals and funding agencies. Additionally, Dr. Dudley has been recognized by numerous awards and honors related to research, teaching and innovation.

Mark S. Erickson, Ph.D. is an Associate Professor of Chemistry at Hartwick College. His research interests include organic and organometallic conducting polymers and his research group is focused on the synthesis of molecules for use in conducting or semiconducting polymers. Dr. Erickson has been an independent chemistry consultant for 18 years, during which time he has provided expert testimony and analysis based on his expertise in Structural Analysis and Chemical Education. He has authored over 17 publications and is a member of multiple professional organizations to include the American Chemical Society.

Heather L. Harris, M.F.S., J.D., D-ABC is a certified independent forensic chemistry consultant and Professor of Forensic Chemistry at the Center for Forensic Science Research and Education at Arcadia University. Ms. Harris has worked as a forensic chemist at NMS Labs and in the Bexar County Criminal Investigations Laboratory in San Antonio, Texas where she performed drug and clandestine lab

analysis. Ms. Harris holds a Master of Forensic Science degree, is a licensed attorney, and has over twelve years of expertise in analytical techniques and subsequent legal interpretations of forensic scientific evidence within the areas of criminal and regulatory drug law and is certified as Diplomate in General Criminalistics and Drug Analysis by the American Board of Criminalistics. She actively participates in a number of professional organizations, most notably, she was a member of the Advisory Committee for the Evaluation of Controlled Substance Analogs (ACECSA), and served as Structure Evaluation Subcommittee Chair whose goal was to develop a protocol for the objective and consistent comparison between structures of alleged controlled substance analogs and scheduled drugs.

Lindsay E. Reinhold, M.F.S., F-ABC is a senior scientist in the pharmaceutical services industry and an independent Forensic Chemistry Expert with 14 years of experience in the field of Forensic Drug Analysis. She has a Master of Forensic Science degree and is certified as a Diplomate by the American Board of Criminalistics in Drug Analysis. Ms. Reinhold has worked as a Forensic Chemist at NMS Labs where she analyzed evidence to identify and confirm controlled substances using chemical microscopic and instrumental methods at a rate of approximately 200 cases per month. She also worked as a Criminalist in the New York City Police Department, Forensic Investigation Division where she was trained in the scientific and legal background of controlled substance analysis. Ms. Reinhold is an active member in a number of professional organizations, and most notably, she was the co-founder of the ACECSA.

Terry Stouch, Ph.D. has 25 years experience in drug discovery research in pharmaceutical and biotechnology specializing in drug design, molecular property prediction, structure, evaluation and modeling. He is President of Science for Solutions, LLC, a consulting firm specializing in molecular and computational sciences; Advisor to BioPharma Research Council, and Adjunct Professor in the Department of Chemistry and Biochemistry, Duquesne University. He is a Fellow of the American Academy for the Advancement of Science and the International Union of Pure and Applied Chemistry. He has participated in several federal hearings and as an expert in trials related to this matter and is a member of the Pistoia Alliance and also served on the ACECSA.

SUMMARY OF ARGUMENT

The purpose of this amicus brief is to highlight problems associated with the term "substantially similar" within the Controlled Substance Analogue Enforcement Act of 1986. 21 U.S.C. §§ 802, 813 (2013) ("CSAEA"). The issues are significant and relevant to this Court's analysis of the prosecutorial requirements under the statute.

The CSAEA provides that, to the extent a controlled substance analogue is intended for human consumption, it is to be treated as a schedule I controlled substance for purposes of any federal law. *Id.* The CSAEA was designed to combat the problem of persons who seek to avoid the reach of federal criminal drug laws by manufacturing or distributing substances that are not listed as controlled substances, but which are specifically designed to provide effects that are "substantially similar" to the effects of listed substances.

The primary challenge of an alleged analogue evaluation is that the statutory provision set out in 21 U.S.C. § 802(32)(A)[2] does not define "substantially similar." The classification of two chemical substances as "substantially similar" for the use in the legal system is concerning for two reasons.

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[2] For example, the CSAEA states that "the term 'controlled substance analogue' [includes] a substance . . . (i) the chemical structure of which is *substantially similar* to the chemical structure of a controlled substance in schedule I or II." *Id.* (emphasis added). However, the statute is devoid of a definition for "substantially similar." *See id.*

First, the phrase "substantially similar" has no quantifiable meaning and, thus, no objective criteria for its measurement exist. There simply is no established and agreed upon rubric in the scientific community to measure structural similarity. Additionally, neither the field of forensic chemistry, nor any major academic, government, or technical forensic science entity has developed a standard definition for "substantially similar" or a standard method for the evaluation of alleged analogs.

Second, when attempting to compare either chemical structures or the effects of the two substances, scientists do not agree on what should be compared, nor the weight each comparison should be given. In other words, similarity depends on what is being compared, whether it is core structure, functional group, or some other factor. Further, even if scientists were to agree on what to compare within the chemical structure of two molecules when comparing the structural similarity, the CSAEA fails to provide a defined threshold where ordinary similarity ends and substantial similarity begins.

ARGUMENT

The definition of "controlled substance analogue" has two requirements. For a substance to satisfy the definition of "controlled substance analogue," the substance at issue must (1) have a chemical structure that is "substantially similar to the chemical structure of a controlled substance in schedule I or II" (structure prong), and (2) it must have an effect that is "substantially similar" to a controlled substance in schedule I or II (effect prong). 21 U.S.C. § 802(32)(A) (2013).[3] This provision sounds simple on its face, but it is a complex and unsettled area in forensic chemistry. The phrase "substantially similar" has no quantifiable meaning and, thus, no objective criteria for its measurement exist. This statutory language demands a substance by substance evaluation and interpretation, often based on little more than subjective feelings about the appearance of two-dimensional diagrams. *See United States v. Brown*, 415 F. 3d. 1257, 1261-63 (11th Cir. 2005). This approach discourages scientific discussion and

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[3] The second requirement above may be satisfied by showing the substance at issue produces *either* a substantially similar effect as a controlled substance, *or* that "a particular person . . . represents or intends" the substance to have a substantially similar effect as a controlled substance. *Id.* (emphasis added). The conjunctive reading of these two prongs has been accepted by the "vast majority of federal courts." *United States v. Turcotte*, 405 U.S. 515, 522 (7th Cir. 2005). In *United States v. McFadden*, "both parties advocated for a conjunctive reading of the statute, [and] the court assumed, for purposes of this case, that it is the correct one." *United States v. McFadden*, 15 F. Supp. 3d 668, 672 n.2 (W.D. Va. 2013), *aff'd*, 735 F.3d 432 (4th Cir. 2014).

currently results in disparate opinions by chemists, thus showcasing the lack of consensus in the field.

Therefore, the difficulty arising from the definition of "controlled substance analogue" is that "substantially similar" is not itself defined, leaving courts, attorneys, and experts in disagreement as to its meaning and the sufficiency of evidence required to prove "substantial similarity." A consequence is that "[a] substance's legal status as a controlled substance analogue is not a fact that a defendant can know conclusively *ex ante*; it is a fact that the jury must find at trial." *United States v. Turcotte*, 405 F.3d 515, 526-27 (7th Cir. 2005).

Generally, to decide whether a substance is "substantially similar" to a scheduled controlled substance, juries must resolve the conflicting claims of expert witnesses on complex matters of scientific methodology, chemistry, and biology. *See, e.g.*, *United States v. Brown*, 415 F.3d 1257, 1261-63 (11th Cir. 2005); *United States v. Forbes*, 806 F. Supp. 232, 237 (D. Colo. 1992) (noting defendant was prosecuted despite the fact that the "government's own chemists cannot agree" on whether the substance at issue met the "substantial similarity" test, perhaps in part because the "scientific community cannot even agree on a methodology to use to determine structure similarity").

The resolution of this issue by juries has proved problematic because the term "substantially similar" has no scientific meaning, there is no definition to help determine when two similar structures become "substantially" similar, and there is a lack of scientific consensus as to how to compare *structural* similarity or *effect* similarity.

I. The Term "Substantially Similar" Has No Scientific Meaning.

There is no scientific consensus for determining when two chemicals are "substantially similar." The standard is a legal construct with no scientific definition and there is no established methodology accepted by the scientific community that can measure this term.

One of the principles underlying the scientific method is that it provides a systematic approach to knowledge. By creating hypotheses that are capable of being tested, the information collected from such tests adds reliability to the truth or falsity of the hypotheses. Similarly, the ability of a test to be repeated, producing consistent results, adds to the reliability of the hypotheses. In short, the uniformity of the test and the results allows for the hypotheses to be confirmed or denied, thereby adding to a scientific knowledge base that can be relied upon.

We are at the hypothesis and observation stage of the scientific method with respect to comparing analogues. There are no tests, no experiments, or established methodologies. There are no peer-reviewed articles or textbooks directly addressing the meaning of "substantially similar" that a scientist can look to for help. Because of this, scientists are left to form opinions based on their own individual methods and interpretations, but these are not and should not be considered scientific conclusions.

The term "substantially similar" is simply not used to quantitatively compare the structures of two molecules, nor is the parameter defined in instructive articles or textbooks that are publically available through externally peer-reviewed scientific literature. There is no consensus or agreed upon scientific

methodology to determine whether one substance is "substantially similar" in structure to another. There simply is no standard methodology for the qualitative and/or quantitative measure of "substantial similarity" between chemical structures.

This lack of consensus is not simply the opinion of the amici who are submitting this brief to the Court, but has been documented in open court by testimony of government experts who were ultimately called to conclude that two compounds were substantially similar.

In *United States v. Brown*, one of the government's expert witnesses, Dr. Richard Irwin,[4] testified that there is no universal agreement on what constitutes a "substantially similar chemical structure," and that ***"it's pretty much a gut level thing."*** Transcript of Trial[5] at 42, *United States v. Brown*, 279 F. Supp. 2d 1238 (S.D. Ala. 2003) (No. CR.A. 02-00185), *aff'd*, 415 F.3d 1257 (11th Cir. 2005) (emphasis added).

The cross examination of Dr. Thomas DiBerardino,[6] a DEA chemist and expert for the government in *United States v. McFadden*, concisely states the issue:

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[4] Dr. Richard D. Irwin, National Institute of Environmental Health Sciences.

[5] The Transcript of Trial is not consecutively paginated. This document is Volume II of the Transcript of Trial, document # 264.

[6] Dr. Thomas DiBerardino, Chemist, DEA, Office of Diversion Control, Drug & Chemical Evaluation Section.

> Q: Is there a scientifically commonly understood definition to substantially similar?
>
> A: I don't think so, no.

C.A. J.A.[7] at 474, *United States v. McFadden*, 15 F. Supp. 3d 668 (W.D. Va. 2013) (No. 3:12-CR-00009), *aff'd*, 753 F.3d 432 (4th Cir. 2014).

It appears that the only consensus among the scientific community is that there is no consensus when it comes to interpreting the term "substantially similar."

Standards are not a choice of the person claiming to be an "expert witness." Nor can standards in forensic science be formulated individually to fit the argument of either the government or the defense. Standards in forensic science cannot be formulated individually. Expert witnesses are entitled to their own opinions which must be substantiated by supporting reliable data, however, expert witnesses are not entitled to the privilege of creating their own facts. Claiming that "the chemical structure [of a substance] is substantially similar to the chemical structure of a controlled substance in schedule I or II" without a detailed explanation and reference to an acceptable standard or definition, in effect elevates the expert into the role of a law maker rather than as

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[7] Because the trial transcript is not consecutively paginated, this brief will refer to the transcript by reference to the page numbers in the Joint Appendix filed with the court of appeals and available on Pacer at Docket No. 19.

an expert expressing an opinion based on a scientific standard.

II. Without Defined Standards, Scientists Must Decide On A Case-by-Case Basis What To Compare Within Each Substance Resulting In Subjective Opinions That Vary Widely.

Because neither the field of forensic chemistry, nor any major academic, government or technical forensic science entity has developed or promoted a standard definition for "substantially similar," or a standard method for evaluation of alleged analogues, scientists must subjectively decide what approach to use when evaluating the similarity of compounds. Numerous problems arise because of this lack of a scientific standard. As it relates to the similarity in chemical structure, scientists do not have any guidance as to what they are comparing within the chemical structure of the two molecules. Further, even if scientists agreed as to what was most important about the chemical structure, no definition exists to guide the opinion as to when something similar becomes "substantially similar." Finally, when comparing the effects of two substances, scientists are left with undefined parameters in deciding what is most significant.

A. Similarity Depends On What Is Compared Within The Chemical Structure Resulting In Divergent Subjective Opinions.

Scientists do not agree which components of a substance's structure should be compared to assess similarity and how much weight should be given to each component. There are simply too many perspectives to take in comparing structures. Each

method will draw its own conclusion, sometimes with different conclusions even using the same method.

Even someone without a Ph.D. in Organic Chemistry can understand that the term "structure" when applied to a chemical substance can refer to many things. Regardless of whether a non-chemist understands the science behind each of the examples below, the mere variety in the methods is evidence that they are necessarily going to lead to subjective choices which then lead to inconsistent conclusions. In other words, the following examples simply demonstrate that when chemists talk about chemical structure, they can be referring to many different aspects of how the chemical is put together.

For example, one method may place particular importance on whether the two molecules share the same functional groups,[8] whether they have the same core structure, and examine the prevalence and location of reactivity-modifying double bonds. This one method shows the variety of factors that can be compared: core structures include the rings and chains that compose the base structure of the molecules; functional groups include the additional structural features, such as alcohols, amines and ketones, that determine chemical reactivity and metabolism; and finally, the presence and location of

---

[8] "Organic compounds are thought of as consisting of a relatively unreactive backbone, for example a chain of hybridized carbon atoms, and one or several functional groups. The functional group is an atom, or a group of atoms that has similar chemical properties whenever it occurs in different compounds. It defines the characteristic physical and chemical properties of families of organic compounds." INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY, COMPENDIUM OF CHEMICAL TERMINOLOGY GOLD BOOK 605 (Ver. 2.3.3 2014).

double bonds, particularly conjugated double bonds or double bonds proximal to functional groups, impact both the reactivity of a molecule as well as its three-dimensional structure.

Another method that might be used broadly finds similarities between two structures by picking shared fragments such as an indole moiety[9], even though the indole moiety is a common fragment and is shared by thousands of other compounds. The same could be said about considering the indazole, phenyl, and naphthyl moieties in a comparison exercise. So, in fact, the structures are not directly compared, but instead, similarity depends on commonly held structural fragments.

Other methods may consider shared carbon skeletons or structural classes. These examples simply demonstrate that the term "structure" when applied to a chemical substance can refer to many things.

One of the primary problems that arises from these subjective choices is that it is logically impossible from any perspective to argue that two chemicals are substantially similar, and at the same time acknowledge that they possess differences in chemical formulations, synthesis protocols, molecular weights, electronegativity, bond lengths, and bond angles. And when these variances in chemical formulation result in divergences in chemical

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[9] "In physical organic chemistry moiety is generally used to signify part of a molecule, e.g. in an ester R^1 COOR^2 the alcohol moiety is R^2O. The term should not be used for a small fragment of a molecule." INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY, COMPENDIUM OF CHEMICAL TERMINOLOGY GOLD BOOK 946 (Ver. 2.3.3 2014).

properties and resulting analytical data, the "substantially similar" and "chemical structure" arguments become even more illogical and move even further away from scientifically reliable conclusions.

1. The Common Use Of Two-Dimensional Line And Letter Representations Are Misleading And Insufficient.

Dr. DiBerardino testified in *McFadden* with the aid of two-dimensional diagrams, exhibits commonly misused by government experts in drug analogue cases. C.A. J.A. at 440 ("I'm going to show you a number of exhibits and ask if you would identify them."); *see* Gov't exhibits 75-83 (all two-dimensional diagrams including some that superimpose the alleged analogue structure and the controlled substance structure for the jury's comparison.) *Id.* at 440-64.

Two-dimensional diagrams are often used to simplify the complexities of the chemical structures being compared, but result in an oversimplification. In fact, when Dr. DiBerardino testified at trial, he explained on direct examination that he even left out information from the diagram because it might be too confusing:

> It's only because when you start adding all these carbon groups and whatnot, *it gets very, very busy*. . . .
>
> When we talk about structure, the analysis is based on those [carbon and hydrogen atoms] being there, but we don't have to

> look at them again because *it just gets too noisy*. It would just be too hard to decipher through all that.

Id. at 444. (emphasis added)

Two-dimensional structures using stick and letter drawings of molecules do not even begin to represent to the untrained observer the reality of "chemical structures," which exist dynamically in three-dimensional space. Any comparison of chemical structures which relies upon an evaluation of two dimensional representations for the purpose of justifying or arguing structural similarity is problematic at best, and at worst will unintentionally mislead a non-scientist into believing an "expert's" assertion on the mere basis that it is asserted by an "expert."

Two-dimensional stick and letter diagrams are misleading. Two-dimensional cylindrical bond "stick and ball" diagrams, while being a bit better in their depiction of three-dimensionality, still fall short of accurately depicting the reality of chemical structure to determine structural similarity. Three-dimensional cylindrical molecular structures in combination with three-dimensional "cluster" molecules are much better representations for scientists (and especially for non-scientists) to determine whether the requirements of reliable and relevant evidence exist. Only when the nature of the structures is understood can the discussion of molecular structure and the comparisons move forward.

An additional difficulty with stick and letter drawings is they do not show molecular structural

dynamics, nor do they include all of the atoms which comprise the individual "chemicals" which are being reported. It is easy to understand how a non-chemist could look at these drawings without understanding what they represent and agree with anything an expert chemist might assert about them. The interpretation of scientific notation, represented in these stick and letter drawings, by non-scientists, even by those trained in the law, is problematic without a basic understanding of what this notation means.

Two-dimensional stick and letter drawings are essentially "codes" that trained chemists can interpret to gain an understanding of the true three-dimensional shape and dynamics. However, this "code" takes years of study to learn and understand. It is even more problematic for a scientist to use chemical notations in a non-scientific forum like a courtroom without direct explanations of exactly what those notations mean.

Any reporting of or testimony related to structural similarity between two different molecules based on a visual inspection of two-dimensional drawings does not meet the requirements for scientific reliability in the laboratory. In fact, Dr. DiBerardino admitted on direct examination during trial that he was simply "drawing pictures" and "staring at a computer" and was "not in a lab." *Id.* at 440. In the absence of corroborating data and more information, there are few if any credible forensic chemists who would base any conclusion of similarity solely on two-dimensional diagrams. Trained chemists, upon reviewing a two-dimensional molecular drawing, automatically "translate" the

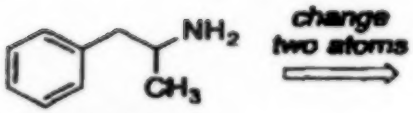
code to consider the proper three-dimensional and dynamic structure. In fact, the first question a credible forensic chemist asks in any kind of a forensic analysis where a comparison is the basis for a conclusion is: "Are there differences in what is being observed in the comparison?" And if differences do exist, they will usually result in a qualified conclusion that the entities being compared are different.

2. The Approach Used By The Government In *McFadden* To Determine "Substantial Similarity" Is Overly Broad And Leads To Absurd Results.

The government's argument, in *McFadden*, for assessing the similarity between chemical structures is overly broad and can lead to absurd results. The identified "core structure," phenethylamine, forms a small part of the molecule and defines a structural category so large that it results in being over inclusive. The government's argument – that changes occurring on the periphery are not "substantial" — is invalid and produces absurd results. The comparisons below illustrate the problems that could result from the government's argument. Additionally, these comparisons illustrate how two-dimensional diagrams can be overly simplistic and unintentionally mislead a non-scientist observer about the reality of a substance's chemical structure.

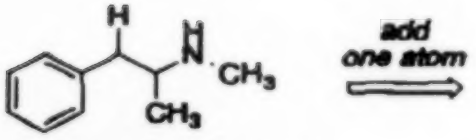
Functional groups matter

(GB Dudley, PhD)



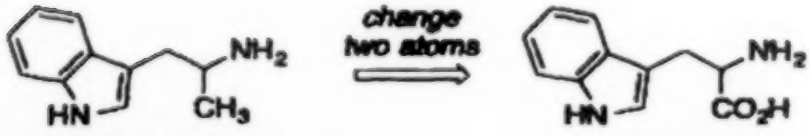
amphetamine
(drug of abuse)

phenylalanine
(essential amino acid)



methamphetamine ("meth")
(drug of abuse)

pseudoephedrine (Sudafed)
(non-prescription decongestant)



alpha-methyltryptamine (AMT)
(drug of abuse)

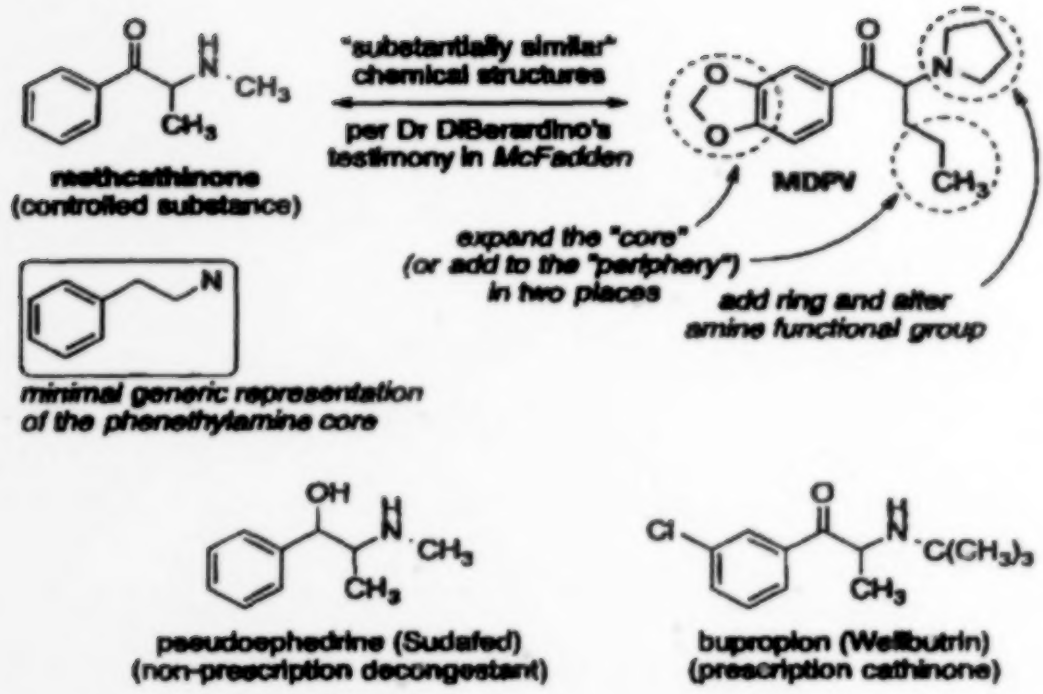
tryptophan
(essential amino acid)

Applying the government's "core structure with peripheral change" methodology along with two-dimensional representations, the essential dietary amino acids phenylalanine (top) and tryptophan (bottom) could be considered structural analogues of the controlled substances amphetamine and alpha-methyltryptamine (AMT), respectively. The structural differences in each case can be (simplistically) described as changing two atoms on the periphery. The fallacy of this analysis is that it ignores the importance of functional groups, but the significance of this change may not be obvious to non-chemists. Pseudoephedrine (middle) only has one

extra atom compared to methamphetamine. Pseudoephedrine is controlled because it can be converted chemically into methamphetamine, not because it is "substantially similar" to methamphetamine, although they are both phenethylamines that differ only by a single atom on the periphery. Clearly the government's methodology in *McFadden* cannot be applied consistently.

Whatever methodology ultimately emerges for determining what is or is not "substantially similar" will have to recognize the importance of functional groups in comparing chemical structures.

The "core" and "periphery" of chemical structures are often themselves subjective constructs of the human mind that reflect individual biases toward specific structural features. The same compound may be given different names (e.g., "cathinone" or "beta-keto amphetamine") by different people who prioritize differently the defining structural features. In cases where there are true "core" (interior) and "periphery" (exterior) structural features, the peripheral features generally have a greater impact on chemical properties because of their greater exposure to neighboring molecular structures.



In *McFadden*, to determine that Methylenedioxypyrovalerone ("MDPV") is "substantially similar" in chemical structure to methcathinone based on their shared phenethylamine core, one would have to dismiss several expansions of the "core" structure (or additions to the "periphery," depending on one's individual biases) as well as an alteration to the amine functional group, while also disregarding structures like those of legal substance like pseudoephedrine and bupropion, which might reasonably be deemed more similar to methcathinone than is MDPV.

The lack of boundary conditions on what can be deemed "substantially similar" allows for arbitrary, inconsistent, and potentially absurd interpretations. Most egregiously, features deemed "important" in one case might later be deemed "unimportant" in a different case.

Notwithstanding these potentially absurd results, a "core structure with peripheral changes" approach still does not clarify the legal status of an unknown chemical structure. If the CSAEA stated that an analogue was a substance with a core structure similar to that of a Schedule I or II controlled substance with only peripheral changes, disagreements would still persist in the scientific community. One chemist might see the phenethylamine core structure present in Methcathinone and MDPV and consider them analogues. However, another chemist might consider the core structure of MDPV to include all 3 ring structures meaning it would not meet the core structure criterion. In other words, even if scientists agreed at a general level that the appropriate way to measure "substantial similarity" is by comparing the degree of alteration from a common core, there would still be disagreement about how to define a chemical's "core."

Regardless of how a scientist breaks down the analysis of chemical structure, without guidelines, rules, or acceptance criteria, there will always be disagreements in the scientific community. If the scientific community cannot agree, how could a lay-person, such as a juror, be expected to know whether the substance in question was a controlled substance or not?

B. There Are No Quantifiable, Objective Criteria For Determining When Similarities Between Substances Become "Substantial."

Even if scientists agreed on what they were comparing within the chemical structure, the CSAEA language fails to provide a defined threshold where

ordinary similarity ends and substantial similarity begins. When trying to determine whether one chemical structure is "substantially similar" to another, a scientist must ask, "What threshold is necessary to say the structures are *substantially* similar?" Are the two structures substantially similar if 51% of the structures are the same? 75%? 95%? It is left to a scientist to establish the answers to these questions for herself as there are no widely accepted answers to these questions. Scientists have no guidance based on actual science to answer these questions.

Because there are simply no quantifiable, objective criteria for determining when similarities between substances become "substantial," courts are left to make such a determination on a "case-by-case," or "substance-by-substance" basis. In the absence of a universally accepted objective and quantitative measure of similarity, the phrase "substantially similar in structure" gives no guidance to confidently, or reliably conclude whether any change in structure qualifies as significant or not, resulting in a subjective determination heavily influenced by each individual user's perspective. "Substantially Similar" lacks a defined measurand, without which, the magnitude of similarity cannot be quantified.

The CSAEA fails to define the magnitude of similarity required before "substantially" similar relationships are determined. Known error rates, measurands, thresholds, and calibration standards cannot be determined, resulting in similarity comparisons that are susceptible to user and methodology-dependent conclusions leading to divergent interpretations and bias between analysts.

Consequently, the analysis is subject to designing the test in order to have the result desired. What we see and report as scientists should not be dependent upon what we are looking for.

C. Scientists Cannot Accurately Determine "Substantial Similarity" Of The *Effects* On The Central Nervous System Of Different Substances Because There Are No Defined Criteria In The CSAEA.

The second criterion for inclusion of a compound as a controlled substance analogue is defined by 21 U.S.C. §802(32)(A) as a substance: "(ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in Schedule I or II." The term "substantially similar" as to effect is no more defined than the term "substantially similar" when applied to chemical structure.

Pharmacological effects in humans are by their nature nuanced, graded, and variable. A "stimulatory" effect produced by two drugs that, on the surface, appears "similar," may in fact be due to radically different pharmacological mechanisms. The phrases "pharmacological activity" and "pharmacological effect" are ambiguous and could refer to one of an almost unlimited variety of pharmacological properties. Examples of such properties include binding affinity of drugs to membrane and cytoplasmic receptors, enzymes, transporter molecules, DNA, RNA, or other molecular targets in addition to specific drug effects on liver,

renal, central nervous system, lung, or any of a myriad of specialized cells.

Such properties can also refer to functional effects on cognition, physiological parameters such as blood pressure and heart rate, sexual function, appetite, behavior, memory, or locomotion. Consequently, two drugs may cause similar effects on one pharmacological endpoint (like blood pressure) but totally different effects on another (like motor activity), making comparative evaluation of the two drugs under the simplified criteria of the CSAEA virtually impossible.

The psychotropic effects of drugs of abuse almost always involve binding and activation (or inhibition) of specific receptors for neurotransmitter or other neuroactive molecules in the central nervous system. In order to assess the ability of prototypical drugs to produce these effects, initial studies often employ measurement of binding affinity with isolated receptors or cell membranes containing the receptors. These experiments are performed *in vitro*, i.e., in an artificial "test tube" system outside of a whole animal or human being. There are significant problems with attempting to extrapolate *in vitro* binding or neurotransmitter release data determined for one drug to another untested, but chemically related compound. This is because small structural differences in drug molecules can lead to large changes in transporter or receptor binding affinity, thus potentially leading to major pharmacological differences. Consequently, the appropriate use of such assays is only to indicate which compounds may be considered for further testing.

Since it is impossible to predict with confidence how *in vitro* data will translate into pharmacological

effects in living systems, the objective and accurate prediction of central nervous system activity of drugs in humans based on *in vitro* data alone is unreliable. Thus, at the very least, a sound and reliable analogue drug scheduling approach should involve assessment of stimulant, depressant, or hallucinogenic effects in animal models in addition to corroboration from human data.

The CSAEA does, after all, specify that these effects be demonstrated "*on the central nervous system,*" a requirement that cannot be achieved by *in vitro* testing or structure-activity considerations alone. *Id.* (emphasis added).

Animal models assess behavioral pharmacology endpoints such as locomotor activity, catalepsy, drug discrimination and self-administration responses, in addition to physiological measurements such as body temperature. While offering additional data on the potential central nervous system activity of candidate drugs, these models all suffer from shortcomings when used to predict similar (i.e., qualitative and quantitative) effects in humans, and therefore are best considered suggestive but not selective or definitive tools. Consequently, they are typically employed in pharmaceutical development as screening assays to either identify appropriate drug leads for further testing or to eliminate drugs that may exhibit undesirable activity at an early stage of development.

In contrast, the use of such behavioral and physiologic assays for definitive comparisons and predictions of relative drug activities in humans is problematic. Such a goal would require rigorous attention to negative and positive controls, variance in within- and between-test results, and an ability to

identify what specific effect the animal is responding to (i.e., a typical drug will produce multiple effects, any of which could lead to the same behavioral response). It can be reasonably argued that these tests are not highly predictive, as there are multiple examples of false positive results (i.e., drugs that substitute for the training drug but do not produce similar effects in humans). The bottom line is that no one really knows what the animal is actually perceiving or responding to, therefore the test is best used only for preliminary evaluation of human psychoactive potential.

In summary, asking scientists to accurately compare two substances to determine "substantial similarity" as to the effects of those substances sets a standard that cannot be satisfied in the absence of actual human data. *In vitro* and animal models alone are insufficient to predict with a high level of confidence the possible central nervous system stimulant, depressant, or hallucinogenic effects of novel compounds in humans. This is why drugs developed for the market are ultimately tested in human trials.

CONCLUSION

For the foregoing reasons, the judgment of the court of appeals should be reversed.

Respectfully submitted,

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IN THE

Supreme Court of the United States

STEPHEN DOMINICK MCFADDEN,
Petitioner,

v.

UNITED STATES OF AMERICA,
Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Fourth Circuit

BRIEF OF THE NATIONAL ASSOCIATION OF CRIMINAL DEFENSE LAWYERS AS AMICUS CURIAE IN SUPPORT OF PETITIONER

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INTEREST OF THE AMICUS CURIAE[1]

Amicus Curiae National Association of Criminal Defense Lawyers (NACDL) is a nonprofit voluntary professional bar association that works on behalf of criminal defense attorneys to ensure justice and due process for those accused of crime or misconduct.

NACDL was founded in 1958. It has a nationwide membership of approximately 10,000 and up to 40,000 with affiliates. NACDL's members include private criminal defense lawyers, public defenders, military defense counsel, law professors, and judges. NACDL is the only nationwide professional bar association for public defenders and private criminal defense lawyers. The American Bar Association recognizes NACDL as an affiliated organization and awards it representation in its House of Delegates.

NACDL is dedicated to advancing the proper, efficient, and just administration of justice including issues involving juvenile justice. NACDL files numerous amicus briefs each year in the U.S. Supreme Court and numerous other federal and state courts, seeking to provide amicus assistance in cases that present issues of broad importance to criminal defendants, criminal defense lawyers, and the criminal justice system as a whole. NACDL has a particular

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[1] Pursuant to Supreme Court Rule 37.6, counsel for amicus represent that they authored this brief in its entirety and that none of the parties or their counsel, nor any other person or entity other than amicus, its members, or its counsel, made a monetary contribution intended to fund the preparation or submission of this brief. On March 3, 2015, Petitioner Stephen Dominick McFadden filed a blanket consent to the filing of *amicus curiae* briefs. Respondent has consented to the filing of this brief, and a letter reflecting its consent was filed contemporaneously with this brief.

interest in this case because the proper administration of justice requires that ordinary persons be given fair notice of what conduct is criminal. NACDL writes to emphasize the inconsistencies and controversies that have resulted from the federal courts' attempts to apply the "controlled substance analogue" language of 21 U.S.C. § 813, which exposes defendants to the same penalties as those applicable to the possession and sale of Schedule I substances.

INTRODUCTION

The "controlled substance analogue" definition in 21 U.S.C. § 802(32)(A) turns upon little more than a redundant concept of "substantial similarity" in structure or effect. Whether a charged substance is, in fact, an "analogue" of, or "substantially similar" to, a controlled substance is a dispositive factual question for a criminal jury. Yet federal courts sharply disagree on how to instruct and evaluate jury findings of structural similarity. Some courts look at a visual comparison of exemplars that reflect the pre-ingestion structure of the suspect substance. Other courts look at whether the suspect substance metabolizes into the controlled substance after ingestion. And still other courts require similarity in *both* the *pre*-ingestion and *post*-ingestion structures. To complicate matters further, some courts consider legislative history and DEA regulations as sufficient to provide adequate, due process notice to potential violators. One court has suggested that history and regulations are not merely relevant, but dispositive. Yet other courts consider such obscure sources wholly irrelevant to vital questions about adequate notice. The confusion is an unfortunate, but entirely unsurprising, result of the underlying nebulous quality of the "substantial similarity" standard and the fact that there is no scientific consensus on how to measure it.

Not only is there no scientific consensus, but the methods that courts have employed in these cases have been heavily criticized on many grounds. First, at its core, "substantial similarity" is a political idea and not a genuine scientific concept appropriate for expert testimony. Second, even if it were amenable to scientific rigor, the visual inspection method is unreliable. And third, the structure and effects test simply conflates pharmacological effect with chemical structure and does nothing to address the reliability problems of assessing *chemical* structural similarity and effect by visual inspection alone.

ARGUMENT

I. NO CONSENSUS EXISTS AMONG COURTS AS TO HOW TO GUARD AGAINST JURY CAPRICE.

Courts have held that whether a suspect substance qualifies as a controlled substance analogue is a question of fact. *United States* v. *Klecker*, 348 F.3d 69, 72 (4th Cir. 2003). Accordingly, different juries can and have come to different conclusions about the same substances. Compare *United States* v. *Turcotte*, 405 F.3d 515, 523 (7th Cir. 2005) (jury found 1,4 butanediol (BD) was not an analogue of gamma-hydroxybutryric acid (GHB)), with *United States* v. *Washam*, 312 F.3d 926, 927 (8th Cir. 2002) (jury found BD was an analogue of GHB). Such contrasting results raise troubling questions of arbitrariness in both result and enforcement. There is no legal consensus on the methodology juries should follow to determine whether a suspect substance is an analogue to a controlled substance. Even the forensic scientific community itself is divided on developing the scientific methodology for identifying the compounds in suspect substances.

This confusion is only compounded at the appellate level, where courts review factual findings deferentially. See, *e.g.*, *United States* v. *Fisher*, 289 F.3d 1329, 1337 (11th Cir. 2002). Some courts, instead of attempting to articulate an acceptable and reliable test, have defaulted to a vagueness inquiry. See *Kolender* v. *Lawson*, 461 U.S. 352, 358 (1983) (requiring that statutes provide adequate notice of proscribed conduct and not lend themselves to arbitrary enforcement). Unfortunately, vagueness review itself has generated confusion as to what materials may be relied upon as providing adequate notice. In short, despite significant efforts, the various courts have failed to produce anything like a workable, consistent line marking the outer bounds of "substantial similarity."

A. The Circuits Apply Several Tests That Markedly Differ As To The Elements Used To Determine Whether A Suspect Substance Is "Structurally Similar" To A Controlled Substance.

One difference among the courts concerns the stage or stages at which similarities in chemical composition provide requisite notice of structural similarity. Under the Second Circuit's approach, a suspect substance is structurally similar to a controlled substance if *both* (1) a visual inspection reveals a "readily cognizable similarity prior to ingestion," *and* (2) the suspect substance metabolizes into the controlled substance after ingestion. *United States* v. *Roberts*, 363 F.3d 118, 125 (2d Cir. 2004); *accord United States* v. *Ansaldi*, 372 F.3d 118, 123 (2d Cir. 2004). To focus only on the pre-ingestion visual similarity would fail to capture "relevant characteristics," such as the effect of ingestion, that do not appear in "two-dimensional charts." *Roberts*, 363 F.3d at 124. To

focus only on the post-ingestion metabolization would "offend the plain language of the Act." *Id.* at 125.

Other circuits consider *either* pre-ingestion structure or post-ingestion structure, but not both. The Fourth Circuit, for instance, looks *only* at the pre-ingestion "core" structure, ignoring both the post-ingestion metabolization and "important differences" outside the core. See *Klecker*, 348 F.3d at 71-73. The Fourth Circuit did the same in the instant case. See *United States* v. *McFadden*, 753 F.3d 432, 439-40 (4th Cir. 2014). Conversely, the Eighth and Eleventh Circuits, to the extent they look at molecular structure at all, look *only* at *post*-ingestion metabolization. See *Washam*, 312 F.3d at 931 (focusing on "the fact that [the suspect substance] turns into [the controlled substance] in the body"); *Fisher*, 289 F.3d at 1339 ("It is undisputed that upon ingestion, [the suspect substance] converts into [the controlled substance]. [T]his Court finds that [the suspect substance] upon ingestion meets the definition of a controlled substance analogue as its chemical structure and effect on the central nervous system are substantially similar to [the controlled substance]"); *accord United States* v. *Brown*, 415 F.3d 1257, 1271 (11th Cir. 2005) ("[T]he fact the [suspect substance] converts into [the controlled substance] upon ingestion means that the chemical structures of the two compounds are substantially similar."). Thus, in evaluating the stage at which there is requisite notice of structural similarity, the Fourth Circuit diverges from the Eleventh and Eighth Circuits, and all three diverge from the Second Circuit's pre- *and* post-ingestion test.

Another disagreement among the circuits concerns notice provided by legislative history and DEA regulations. The Eleventh Circuit has held squarely that

legislative history and DEA regulations are irrelevant in determining whether an "ordinary person" would have the requisite notice that a suspect substance was a controlled substance analogue. See *Fisher*, 289 F.3d at 1336-37 ("Although [legislative history and DEA regulations] indicate that both Congress and the DEA considered [the suspect substance] to be an analogue of [the controlled substance], the only thing that matters is that [the suspect substance] meets the controlled analogue definition."). The Second Circuit has suggested the same. See *Roberts*, 363 F.3d at 124 ("It might be argued . that the Act gives neither Congress nor the DEA authority to determine that a chemical is a controlled substance analogue. Instead, it leaves that decision to the courts and, as a result, in the absence of prior court decisions, the statutory and regulatory pronouncements provide no real notice.").

In contrast, both the Seventh and Eighth Circuits consider that adequate notice can be found in the legislative history and regulations. See *Turcotte*, 405 F.3d at 533 (finding it "difficult indeed to claim that Turcotte lacked notice as to [structural similarity]" in light of the congressional "statements" noted in *Fisher*); *Washam*, 312 F.3d at 931 (characterizing the congressional guidance noted in *Fisher* as "explicit notice").[2] The Fifth Circuit went a step further, sug-

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[2] In *Washam*, the Eighth Circuit improperly relied upon the Eleventh Circuit's decision in *Fisher* for support. *See Washam*, 312 F.3d at 931. In *Fisher*, the Eleventh Circuit noted that "the public was given notice that all GHB analogues were illegal when Pub. L. 106-172 was enacted . . . and again when the DEA's Final Rule was published in the Federal Register," but the opinion then focuses on the pertinent question of whether an ordinary person would be on notice that the specific substance in that case, GBL, was in fact an analogue of GHB. *Fisher*, 289 F.3d at 1336-37. As to this inquiry the Eleventh Circuit found

gesting that legislative history was not only relevant to notice of structural similarity but actually dispositve. See *United States* v. *Desurra*, 865 F.2d 651, 653 (5th Cir. 1989) (holding that "[t]he legislative history of the Analogue Act makes clear that [the suspect substance] is a controlled substance analogue" and citing no other evidence of similarity).

B. This Confusion Arises From The Lack Of Scientific Consensus And The Language Of The Analogue Act.

The confusion and inconsistencies described above are the natural consequence of applying an uncertain and still-evolving scientific methodology to vague and ambiguous statutory language. As explained more fully in Section II, the lack of scientific consensus has been acknowledged by the courts. See, *e.g.*, *Turcotte*, 405 F.3d at 531-32; *United States* v. *Forbes*, 806 F. Supp. 232, 237 (D. Colo. 1992). The scientific community has likewise concluded that "[t]here is a lack of comprehensive analytical methods available for detection of these compounds." Madeleine J. Swortwood et al., *Determination of 32 Cathinone Derivatives and Other Designer Drugs in Serum by Comprehensive LC-QQQ-MS/MS Analysis*, 405 Analytical & Bioanalytical Chemistry 1383, 1384 (2013). There are diverse reasons that suspect substances can be difficult to identify from a forensic analytical standpoint including, *inter alia*, the large number of potential structures, the constant introduction of novel compounds, and inadequate accessibility to standards. *Id.* As a result, courts must oversee a battle of the ex-

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only the language of § 802(32)(A) relevant and in expressly rejecting reliance upon congressional findings and the regulations, declared: "[T]he Court will use Section 802(32)(A) to determine if ordinary people would be able to determine that GBL is an illegal analogue of GHB." *Id.* at 1337.

perts staged using disparate and uncertain methodologies. See, *e.g.*, *Brown*, 415 F.3d at 1262-63 (recounting competing expert testimony in which prosecution expert attacked defense expert's methodology as unreliable, while conceding that prosecution expert's own method was neither quantitative nor testable).

The disagreement over the science is only exacerbated by fact that the concept of "substantial similarity" is inherently ambiguous. As one court has observed, the word "substantial" provides insufficient guidance when it modifies something non-quantifiable. See *105 Floyd Rd., Inc.* v. *Crisp Cnty.*, 613 S.E.2d 632, 635 (Ga. 2005); cf. *VIP of Berlin, LLC* v. *Town of Berlin*, 593 F.3d 179, 190-91 (2d Cir. 2010).

II. THE ADMISSIBILITY AND RELIABILITY OF THE MOST COMMON METHODS OF DEMONSTRATING SUBSTANTIAL SIMILARITY HAVE BEEN CRITICIZED BY COURTS AND COMMENTATORS, IMPLICATING THE ACCURACY OF ANALOGUE ADJUDICATIONS.

In three decades since the Analogue Act became law, neither the scientific community nor the courts have settled on a consensus methodology for determining whether an alleged analogue has a "substantially similar" chemical structure to a controlled substance. See *Forbes*, 806 F.Supp. at 237-38. Moreover, the most common methods employed by prosecutors to demonstrate substantial similarity have been subject to serious criticism concerning the methodologies' admissibility and reliability. The lack of consensus coupled with the questionable admissibility calls into question the courts' ability to accurately adjudicate analogue cases.

A. Impermissible Expert Testimony Concerning "Substantial Similarity."

Leading evidence scholars challenge the admissibility of visual inspection evidence under the *Daubert* standard. The visual inspection method—a visual comparison of two-dimensional models of the two chemicals—has become one of the more common methodologies relied on by prosecutors. See, *e.g.*, *Brown*, 415 F.3d at 1262; see also Hari K. Sathappan, *Slaying the Synthetic Hydra: Drafting A Controlled Substances Act That Effectively Captures Synthetic Drugs*, 11 Ohio St. J. Crim. L. 827, 837 (2014). Further, as Dr. DiBerardino did in this case, prosecution experts presenting visual inspection evidence to the trier-of-fact frequently opine on the ultimate issue of whether the two-dimensional models illustrate substantial similarity. See, *e.g.*, *McFadden*, 753 F.3d at 437-38; *United States* v. *McKinney*, 79 F.3d 105, 108 (8th Cir. 1996), *vacated*, 520 U.S. 1226 (1997).

However, Professors Edward Imwinkelried and Paul Anacker contend that *Daubert* precludes experts from testifying that two chemical structures are substantially similar based on visual inspection. *Daubert* mandates that expert testimony be confined to reliable "scientific knowledge." *Daubert* v. *Merrell Dow Pharm., Inc.*, 509 U.S. 579, 588-89 (1993). Yet the phrase "substantially similar" is not a defined scientific concept. Paul Anacker & Edward Imwinkelried, *Controlled Substance Analogue Enforcement Act Criminal Defense*, 37 Sw. U. L. Rev. 267, 273-74 (2008). Prosecution experts have admitted that "determinations about whether chemical compounds are substantially similar [are] a gut level thing or based on intuition." *Brown*, 415 F.3d at 1262 (internal quotation marks omitted). Accordingly, an expert's opinion concerning "substantial similarity" does not quali-

fy as scientific knowledge and is outside the scope of admissible expert testimony under *Daubert*. See Anacker & Imwinkelried, *supra*, at 273-74; see also *General Elec. Co.* v. *Joiner*, 522 U.S. 136, 146 (1997) (noting that courts should exclude evidence under *Daubert* when "there is simply too great an analytical gap between the data and the opinion proffered"). Professors Imwinkelried and Anacker also note that an expert's reliance on a two-dimensional depiction to make such an assertion is less reliable than the expert opinion rejected by the Court in *Kuhmo Tire*. Anacker & Imwinkelried, *supra*, at 273-74; see also *Kumho Tire Co.* v. *Carmichael*, 526 U.S. 137, 153 (1999) (upholding the district court's exclusion of a well credentialed expert's testimony because of concerns about the reliability of the visual and tactile inspection method employed).

A leading and recent forensic science study also cautions against using terms akin to substantially similar when there is not an accepted scientific standard for the term. See Nat'l Research Council, *Strengthening Forensic Science in the United States: A Path Forward* 186 (2009). The report further observes that experts' use of such imprecise terminology in criminal cases may unfairly prejudice criminal defendants as the trier-of-fact is likely to afford considerable weight to the experts' speculation. See *id.*

B. General Reliability Concerns With Visual Inspection.

In addition to the threshold questions about visual inspection for similarity being scientifically sound at all, evidence scholars also have questioned the reliability of the visual inspection method, further implicating its admissibility under *Daubert*. Under *Daubert*, the critical criteria for the admissibility of

expert testimony are its scientific reliability and relevancy. See *Daubert*, 509 U.S. at 592–93.

With respect to visual inspection, scholars have challenged the methodology's probative value, articulating that "[i]t cannot be overemphasized how little information about chemical structure these [visual inspection] diagrams convey." Anacker & Imwinkelried, *supra*, at 273. "The typical sticks-and-letters diagram submitted to a jury in a CS Analogue Act prosecution is a crude, very limited, two-dimensional depiction of some features of chemical structure in which each letter representing an atom is of the same size." Paul C. Giannelli et al., *Scientific Evidence*, § 23.06[c] (Matthew Bender et al. eds., 5th ed. 2012).

Such diagrams are usually devoid of critical information, such as atomic weight and bonding. *Id.* In addition, the two-dimensional nature of the diagrams necessarily conceals important structural features that would be elucidated with a three-dimensional reproduction. See *id.* Even if the comparisons were based on three-dimensional depictions, they would conceal important chemical features beyond the ken of the ordinary trier-of-fact. See *id.* (analogizing comparisons of these diagrams to comparing stick figure portraits or mannequin copies to assess if two people are substantially similar).

Ultimately, these scholars conclude that it is "highly doubtful" that a professional chemist would solely rely on visual inspection to determine if two molecules are substantially similar. *Id.* (citing Dr. Boyd Haley, chemistry professor at the University of Kentucky). Moreover, they posit that "it defies common sense to think that Congress wanted the jury's decision to rest solely on a lay assessment of sticks-and-letters notations." *Id.*

Both federal district and state courts have echoed these scholars' concerns about the reliability of visual inspection. Multiple federal district courts have noted that the "lack of consensus by experts in the field as to the import of [visual inspection] diagrams" raises serious questions about their reliability for establishing substantial similarity. See, *e.g.*, *United States* v. *Roberts*, No. 01 CR 410 (RWS), 2002 WL 31014834, at *4 (S.D.N.Y. Sept. 9, 2002), *vacated*, 363 F.3d 118 (2d Cir. 2004). Further, state appellate courts have cited Professor Imwinkelried's criticisms for the proposition that the use of visual inspection evidence inherently pose reliability questions that, at the very least, mandate a *Daubert* hearing prior to admission. See *State* v. *Shalash*, 13 N.E.3d 1202, 1212-15 (Ohio Ct. App. 2014).

C. The Reliability Concerns Persist With The Structure And Effect Test.

As an alternative to solely relying on visual inspection to establish substantial similarity, some courts use the structure and effects test. However, this test fails to adequately resolve reliability concerns presented by visual inspection alone and offers only another ground for disagreement among courts and scientists.

The structure and effects test combines visual inspection with testimony about the effects of the chemical after metabolization. See *Fisher*, 289 F.3d at 1339. But, these independent components of the test speak to different elements of the offense. The Controlled Substance Analogue Act requires proof that the alleged analogue has both a similar chemical structure and similar pharmacological effect as the controlled substance. See 21 U.S.C. § 803(32)(i) & (ii). The effects of the chemical after metabolization speak to the pharmacological effect. See *Roberts*, 2002 WL

31014834, at *5. Accordingly, relying upon effects *after* metabolization to support the notion that the chemicals are structurally similar inappropriately conflates the similar chemical structure requirement of the analogue definition with the pharmacological effects requirement. *Id.*

At bottom, the structure and effects test still must rely upon the visual inspection method in order to satisfy the similar chemical structure requirement. The reliability concerns of the visual inspection method therefore cannot be overcome by the use of the structure and effects test.

CONCLUSION

For the foregoing reasons, this Court should reverse the opinion of the Fourth Circuit in this case.

Respectfully submitted,

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